Unearthing investor action on biodiversity

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Foreword

Nature is a critical contributor to the global economy and is worth over USD125 trillion, yet time is running out for many of the delicate ecosystems that support the great diversity of life on Earth. Despite biodiversity's imperative for a functioning planet, we are losing animal and plant species at an alarming rate. Vertebrate populations have declined by 68% from 1970 levels[1] and two in five plants are estimated to be threatened with extinction[2]. It is also projected that over half the world's marine species will near extinction by 2050.

In addition to supporting billions of livelihoods which are based on sectors such as agriculture and fishing, biodiversity is necessary to mitigate the effects of climate change as it contributes to healthy oceans and forests which sequester the world's carbon emissions and regulate its temperatures. However, two of the least invested of the UN Sustainable Development Goals (SDGs) remain Life on Land (SDG 15) and Life Below Water (SDG 14) from a private capital perspective.

The acceleration of biodiversity loss is actually stalling the progress of many of the other SDGs. An estimated investment of up to USD967 billion is required each year if the decline in biodiversity is to be reversed by 2030.[3] On the surface, this figure seems large, but it pales in comparison to global subsidies for high carbon-emitting activities that contribute to the biodiversity losses in the first place.

At the inaugural UN Summit on Biodiversity in 2020, a campaign launched by over 130 organisations called for member states to commit an initial USD500 billion to support nature conservation worldwide. We expect this movement to grow, culminating in the UN Biodiversity Conference COP 15 in 2021, when the final decision on the post-2020 global biodiversity framework will be taken, together with decisions on related topics including capacity building and resource mobilisation.

In this report, Credit Suisse has joined forces with Responsible Investor (RI) for an in-depth assessment of how investors view biodiversity. With the topic rising up the agenda in the investment world, we explore the challenges around investing in biodiversity and how to address them.

1. Living Planet Report, WWF, 2020
2. State of the World's Plants and Fungi, Kew Royal Botanical Gardens, 2020
3. Financing Nature: Closing the global biodiversity financing gap, The Paulson Institute, The Nature Conservancy, and the Cornell Atkinson Center for Sustainability, 2020

Investor interest in ESG has accelerated in recent years, but funding for biodiversity has not kept pace. Global biodiversity finance makes up just 0.1% of global GDP. Without a clear investment case for biodiversity, and the creation of investible and structured opportunities for investors to deploy their capital, we cannot address the problem. To date, traditional conservation and biodiversity funding has depended on governments and philanthropic donors, creating a disconnect between the funding mechanisms and what conservationists need 'on the ground' to help stem biodiversity losses.

At Credit Suisse we can draw parallels with our recent work focused on the oceans. As we began to recognise the urgency of deteriorating ocean health, teaming up with Responsible Investor we dove into the topic. Via our research and publication 'Investing in the Blue Economy'[4], we sought to understand why investors had not deployed scale capital targeting SDG 14 Life Below Water. We found that the principal hurdles related to a lack of understanding of the breadth of ocean-related themes and opportunities that exist, and a dearth of investment structures that matched our clients' needs. So we got to work to change that equation. We are proud to have been able to deliver on that objective with differentiated attractive investment options focused on ocean health and conservation. Although this remains 'a drop in the proverbial ocean' today, we do hope our work can be a catalyst for the reallocation of more capital towards the Blue Economy.

We see the same phenomenon occurring in our research on the subject of biodiversity. I'm encouraged that 55% of investors surveyed for this report believe that biodiversity is a major issue, which needs to be addressed within the next 24 months. But attracting private capital into emerging sectors like this requires breaking down investment barriers and originating bankable projects that create sustainable and inclusive opportunities for investors, both private and public.

Through our research, we have found that another obstacle for investors relates to a lack of understanding of biodiversity. There are still a large number of investors who cite lack of knowledge as a key hurdle. I believe that there is a real opportunity for conservation experts and pioneers in the biodiversity finance space to help raise awareness and demystify the topic.

The biodiversity shortfall also lies in developing financial tools across asset classes and conservation programs that combine effective fund deployment with rigorous metrics and verification. As this report shows, the financial community needs to find a common set of standards around biodiversity. Reporting, data and metrics are all crucial for investors to manage biodiversity-related risks and seek investments that support positive biodiversity outcomes, but we do need to keep it simple.

It's clear that collaboration is key for creating awareness and action across policy makers, businesses and NGOs, as well as for the investment community, particularly for a subject as complex as this one. In this respect, I am delighted to have partnered with TNC, ZSL and IUCN on this report as a way to bring this topic to life with such established thought leaders.

With biodiversity expected to be one of the most important topics in the investment world by 2030, we need to start making the case for natural and conservation capital as an investable asset today. Credit Suisse is proud to be a member of the Informal Working Group for the Task Force on Nature-related Financial Disclosures (TNFD), contributing to the creation of framework that will help financial institutions identify and mitigate the impact of their actions on nature and biodiversity.

Through an in-depth understanding of investor concerns and challenges around investing in biodiversity, I am optimistic that the financial markets can begin to mobilise to help to change outcomes by allocating capital towards conserving nature and generating returns, sustainably.

Marisa Drew
Chief Sustainability Officer &
Global Head Sustainability Strategy, Advisory and Finance, Credit Suisse

4. https://www.credit-suisse.com/media/assets/microsite/docs/responsibleinvesting/engaging-for-a-blue-economy.pdf

Investors are increasingly concerned about biodiversity…

84% of respondents are very concerned about biodiversity loss

67% are addressing biodiversity in their portfolio to some extent

55% believe biodiversity loss needs to be addressed in the next 24 months

…however this concern is not yet translating into action

91% do not have measurable biodiversity-linked targets

72% have not assessed their investments' impact on biodiversity

27% are not addressing biodiversity themes to any extent

The sectors investors believe are at most risk from biodiversity loss:

80% Food and beverages

39% Healthcare

35% Consumer goods

Main barriers to making investments supporting biodiversity:

70% Data availability and metrics

49% No way to value natural capital adequately

32% Lack of internal expertise

51% believe biodiversity will be one of the most important topics amongst the investor community by 2030

Executive summary

Author: **Elza Holmstedt Pell**
Responsible Investor

Our first-of-its-kind study is an evaluation of how and to what extent investors are addressing biodiversity. While biodiversity has undoubtedly risen up the agenda in the investment world, this research aims to investigate if this is translating into action.

It explores challenges in considering biodiversity in investing and discusses how to address these barriers:

- A qualified and comprehensive cohort: 327 respondents from 35 countries.
- 53% asset owner respondents and 47% asset manager respondents.

Main findings:

There is an urgent need to capture investors' rising interest in biodiversity. Most respondents are concerned about biodiversity loss and believe it needs to be addressed within 24 months, but this is not yet reflected in their actions:

- 72% have not assessed the impact of their investments on biodiversity.
- 27% of respondents are not currently addressing biodiversity.
- Fewer than one in 10 respondents currently have measurable biodiversity-linked targets.

Despite this, a majority of respondents say they are addressing biodiversity to some extent and are looking to improve:

- 67% of respondents say they are addressing biodiversity to some extent in their portfolios. Most do so through seeking to reduce negative impact, mainly through shareholder engagement and exclusions.
- Two-thirds of respondents are considering setting measurable biodiversity-linked targets.
- Of the investors that have not yet assessed their investments' impact on biodiversity, more than one-third aim to do so going forward.

Investors are struggling to identify and consider biodiversity-linked investment opportunities. Biodiversity needs to be made more digestible and measurable for investor concerns to translate into investment action:

- One-quarter of respondents don't know how to take the first steps to make investments supporting biodiversity and 32% feel they lack the knowledge to do so.
- 70% believe a lack of available data is a key barrier to making investments supporting biodiversity.
- 22% fear investments supporting biodiversity will hurt their financial performance.

More than half of the respondents believe biodiversity will be one of the most important topics in the investment community by 2030:

- Despite this, fewer than one in 10 identified the financial sector as a top three sector at risk from biodiversity loss.

“

Beyond public statements, there is little clarity around investor awareness and concern about the issue and, crucially, how they are planning to address biodiversity loss and make investments supporting nature and wildlife.

Introduction

The aim of this study is to take stock of where investors currently stand in terms of addressing biodiversity.

With one million animal and plant species facing extinction[5], there is no time to lose in addressing this issue, and investors have a critical role to play. The recent flurry of investor statements and initiatives on biodiversity highlight the increasing concern and sense of urgency.

Beyond public statements, there is little clarity around investor awareness of and concern about the issue and, crucially, how they are planning to address biodiversity loss and make investments supporting nature and wildlife.

Private finance flows to projects and solutions supporting biodiversity need to be massively scaled up to meet global targets -- what are the key barriers to such investments and how can they be addressed? Credit Suisse and Responsible Investor aim to shed light on this.

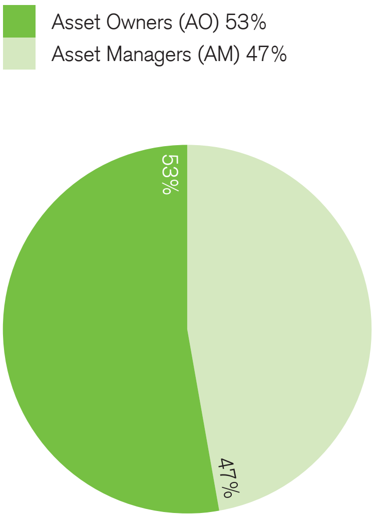
For investors making their first foray into this relatively new frontier in ESG and sustainable finance, this study will highlight examples of how other investors are already taking action on biodiversity and the sources of information and tools they are using to do so.

Furthermore, the urgency of the biodiversity loss challenge will require collaboration between investors, policy makers, businesses and NGOs. We are delighted to be partnering with three biodiversity-focused NGOs, TNC, ZSL and IUCN on this study. We will incorporate their expert comments throughout the report to help put our survey findings into context and include expert views of whether survey respondents are in tune with the challenge.

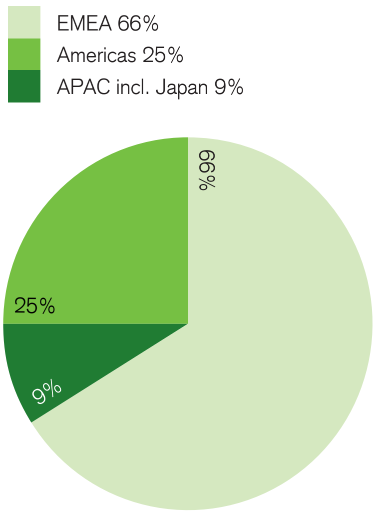
5. https://ipbes.net/news/how-did-ipbes-estimate-1-million-species-risk-extinction-globalassessment-report

Demographics

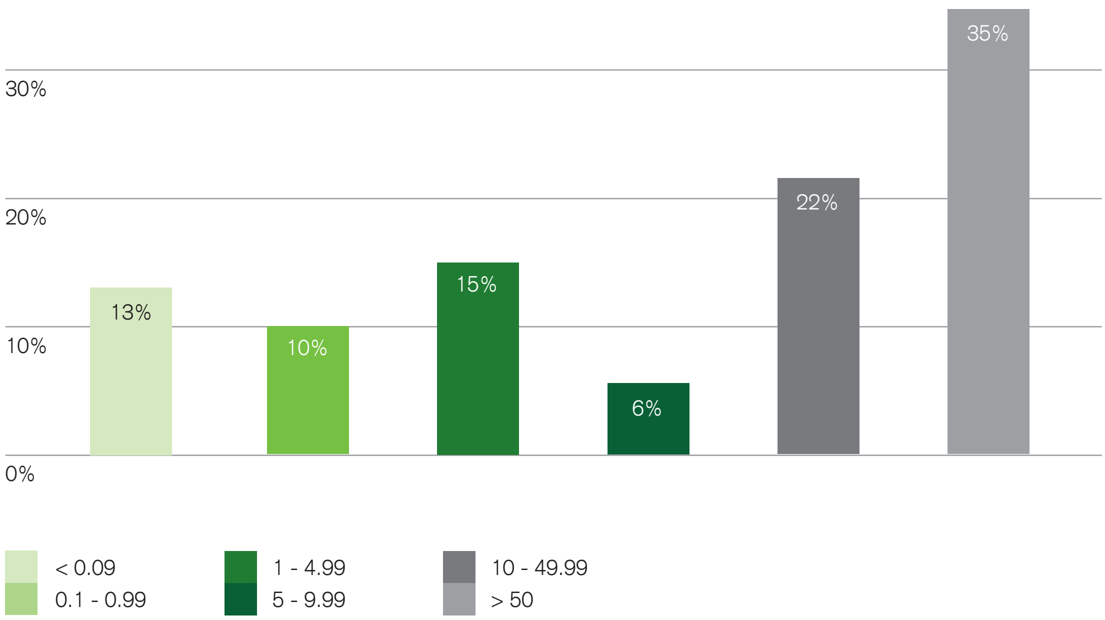
Organisational distribution
% of respondents. 327 respondents



Regional distribution
% of respondents. 327 respondents



Respondents' assets under management (AuM, €bn)
% of respondents. 197 respondents



Asset owner participants made up 53% of respondents to this survey and were defined as respondents from the following organisation types: Corporate pension fund 7%, public pension fund 6%, industry-wide or union pension fund 4%, bank 9%, sovereign wealth fund 1%, insurance company 3%, charity or foundation 16%, single or multi family office 3%, high net-worth individual 4%, public bank/DFI 2%

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Diversity is the opposite of investors' desire for standardisation and comparability of things. Biodiversity is challenging because it really is the anti-commodity.

Piet Klop,
Senior Advisor Responsible Investment,
PGGM

Putting biodiversity in an investment context

What is biodiversity and why does it matter to investors and wider society?

Biodiversity is the variety of life on earth: the wide range of animals, plants and other living organisms and the ecosystems in which they live.[6] It provides and supports everything in the natural world we need to survive.

When discussing the importance of biodiversity to society and - for the focus of this report - why it matters to investors, it is helpful to refer to the following terms:

Natural capital
The world's stocks of natural resources, including soil, air, water and all living things from which humans derive a wide range of services that make human life possible.

Ecosystem services
The flows of benefits to people from ecosystems. They range from food, water and plant materials for fuel, building materials and medicines to less visible services such as climate regulation and natural flood defences, as well as cultural services such as the inspiration we take from the natural world and wildlife.

Biodiversity loss poses huge risks to financial markets. More than half of the world's GDP, around USD 44 trillion, is moderately or highly dependent on nature and its services, according to the World Economic Forum.[7] In addition, the COVID-19 outbreak, with its link to nature and wildlife, has made it increasingly evident that biodiversity should be on investors' radar.

In 2019, RI found that over the next five years 'systemic environmental factors' are considered most likely to be material to asset owners' investment decisions - even ahead of traditional financial factors.[8] The SDGs are a key influence on both corporate and investor responsible investment strategies, and as such, SDG 14 (Life Below Water) and 15 (Life on Land) should actively be on investors' minds.

Yet biodiversity has lagged behind other non-financial factors, such as climate change, that investors need to assess, analyse and integrate into their activities despite being inexorably linked. But this is starting to change. PWC and WWF Switzerland's *Nature is Too Big To Fail* report states that financial actors need to act swiftly on biodiversity, which they believe is the next frontier in financial risk management.[9]

6. The Convention on Biological Diversity (CBD) defines biodiversity as "the variability among living organisms from all sources including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species, and of ecosystems."
7. Nature Risk Rising, World Economic Forum, 2020
8. Fritsch, D. ESG – Do you or don't you? Responsible Investor & UBS Asset Management, 2019
9. Nature is Too Big Too Fail, PwC, WWF, 2020

A raft of investor initiatives are emerging that focus on addressing biodiversity loss and sourcing investment opportunities to support nature and wildlife. Perhaps most significantly, September 2020 saw the launch of a Task Force on Nature-related Financial Disclosures (TNFD) to tackle biodiversity. In a similar vein to the Task Force on Climate-related Financial Disclosures (TCFD), the initiative will bring together financial institutions, regulators, governments and multinational companies to help mainstream the issue of nature-related risks and improve access to data for financial institutions.

Reporting, data and metrics are all crucial for investors to manage biodiversity-related risks and seek investments that support positive biodiversity outcomes, which our survey responses support. There are high hopes and expectations that the TNFD will help achieve just that. The climate-focused equivalent was created in December 2015 and published its recommendations in June 2017 when climate change had already been an established theme, albeit to different extents, for most major financial institutions for several years. This, on top of the mounting evidence that the protection of nature and wildlife is a strategic investment to protect our health, wealth and security, means it is high time for investors across the globe to start taking action or improve efforts already underway to address biodiversity.

Investor awareness and concern

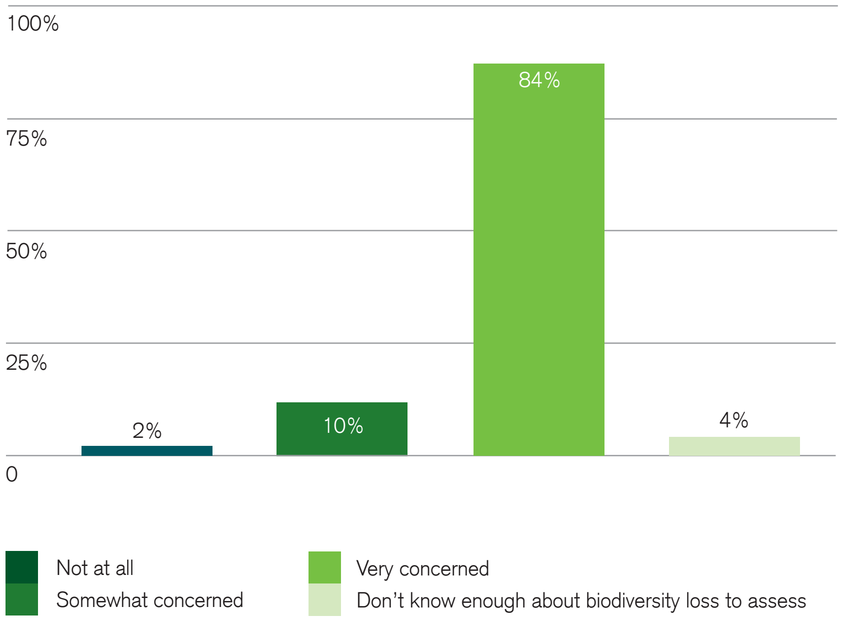
The challenge of protecting wildlife and nature has fallen behind many other sustainability issues for investors and governments alike. Part of the explanation likely lies in the complexity of biodiversity and its loss. “Diversity is the opposite of investors’ desire for standardisation and comparability of things,” says Piet Klop, Senior Advisor Responsible Investment, PGGM. “Biodiversity is challenging because it really is the anti-commodity.”

Investors are increasingly starting to wake up to the challenge. There is a growing sense of urgency in the investment community; 55% of respondents believe the issue needs to be addressed in the next 24 months. Just under 30% responded that biodiversity loss needs to be addressed in the next five years, whilst only 1% said it is not urgent at all.

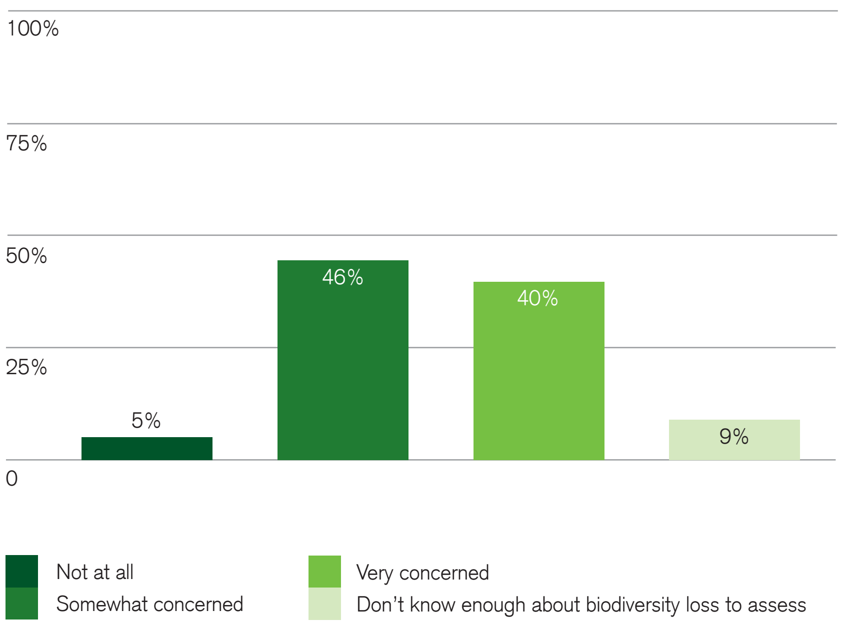
Our investor survey clearly shows that the wider societal concern about nature and wildlife loss and preservation extends to a concern about how these challenges will impact the investment world. More than half of the respondents believe biodiversity will be one of the most important topics amongst the investor community by 2030.

Furthermore, a vast majority of respondents - 86% - are very concerned or somewhat concerned about the impact of biodiversity loss on financial markets.

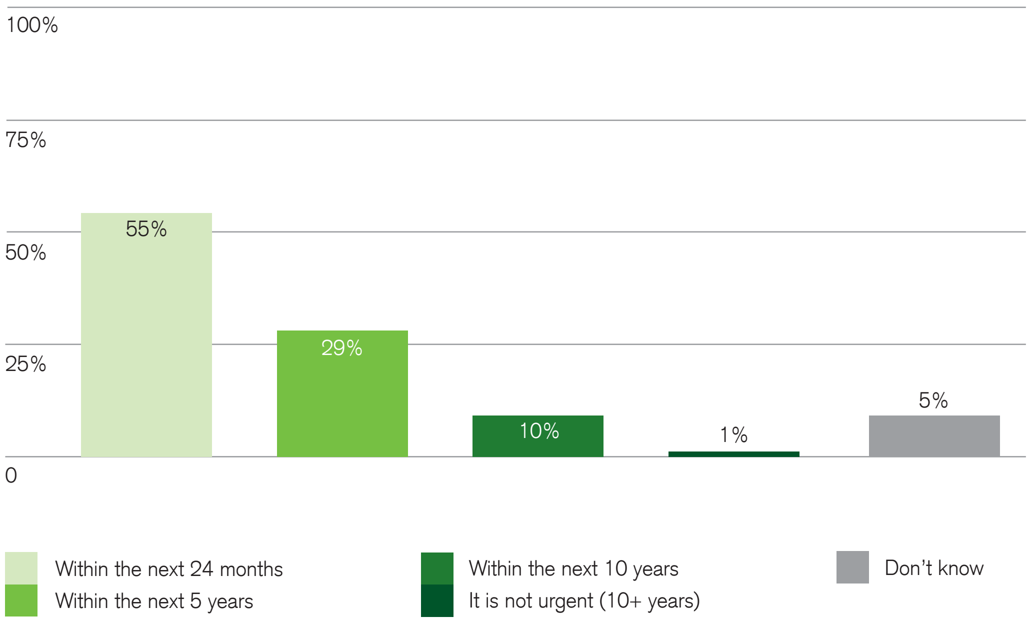
Respondents' concern about biodiversity loss
% of respondents. 306 respondents



Respondents' concern about the impact of biodiversity loss on financial markets
% of respondents. 303 respondents



How urgently does the issue of biodiversity loss need to be addressed?
% of respondents. 305 respondents



Efforts to put a number on how biodiversity loss could hurt global economies show investors are right to be worried. The Global Futures Initiative, a partnership between WWF, the Global Trade Analysis Project and Natural Capital Project, has developed a model to calculate the impact of nature's decline on the world's economies, trade and industry. In a 'business-as-usual' scenario the reduction of ecosystem services would lead to a drop of 0.67% in annual global GDP by 2050 compared with a baseline scenario where there is no change in ecosystem services by this year. The total loss between 2011 and 2050 would be almost USD 10 trillion - or USD 479 billion annually compared to the baseline scenario assuming an economy of the same size and structure as in 2011 - and millions of lives would be affected.[10]

For investors to be able to truly address their impact on biodiversity loss, reduce biodiversity-related portfolio risks and source investment opportunities that support biodiversity, it is important that financial institutions understand the causes and drivers of the issue.

When respondents were asked to select the top three causes of biodiversity loss that are most significant globally, three clear top answers emerged:

- Agriculture and aquaculture (66%)
- Climate change and severe weather (60%)
- Pollution, e.g. domestic wastewater, agricultural effluents, solid waste, airborne pollutant (51%)

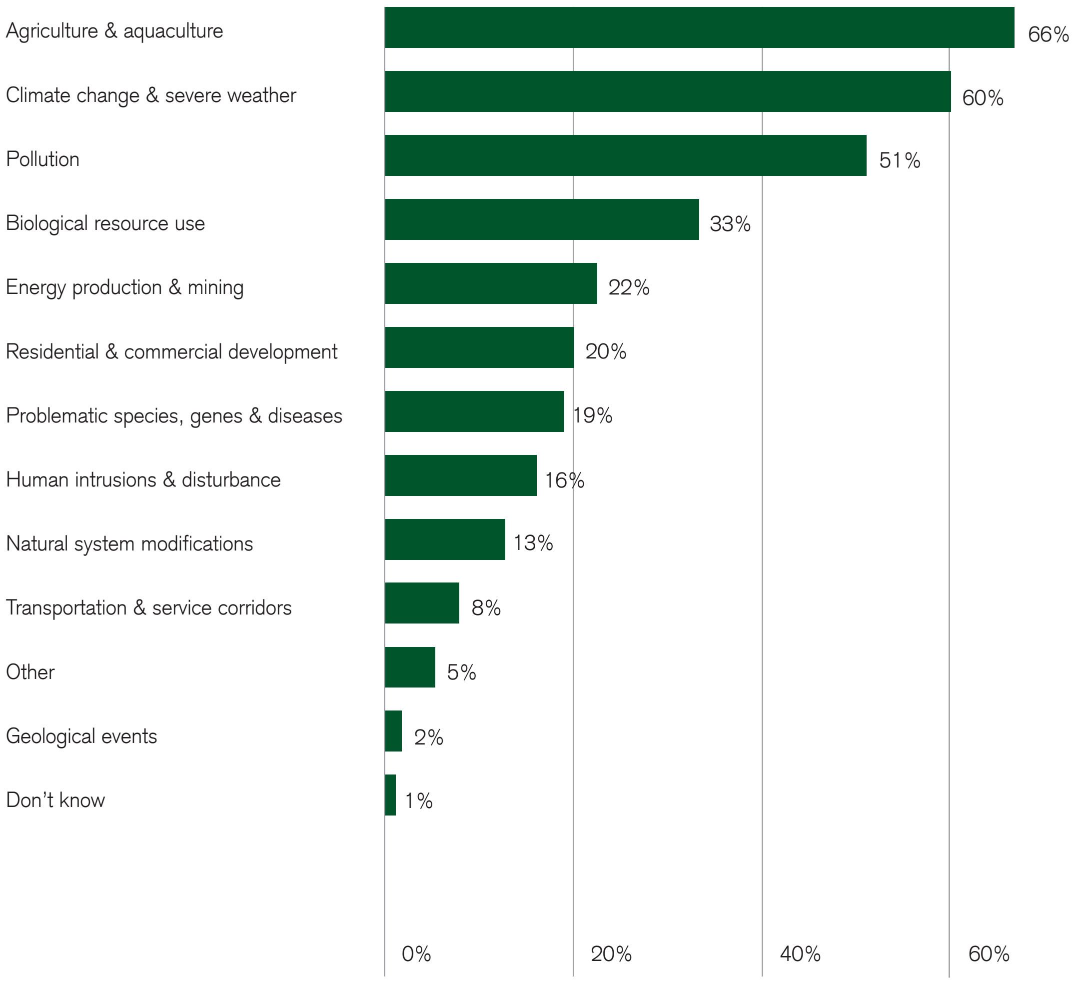
This was followed by biological resource use (33%) and energy production (22%), while other drivers like human intrusions and transport ranked much lower at 16% and 8% respectively.

Largely, the responses show investors are aware of what is causing biodiversity loss. Land-use change, direct exploitation such as overfishing, climate change and pollution are broadly identified as the main drivers of the issue, although there are a range of other both direct and indirect drivers.[11]

10. Roxburgh, T., Ellis, K., Johnson, J.A., Baldos, U.L., Hertel, T., Nootenboom, C., and Polasky, S. 2020. Global Futures: Assessing the global economic impacts of environmental change to support policy-making. Summary report, 2020

11. Biodiversity loss: what is causing it and why is it a concern? https://www.europarl.europa.eu/news/en/headlines/society/20200109STO69929/biodiversity-loss-what-is-causing-it-and-why-is-it-a-concern

What causes of biodiversity loss are most significant globally?
% of respondents. 279 respondents. Respondents were asked to select their top 3.



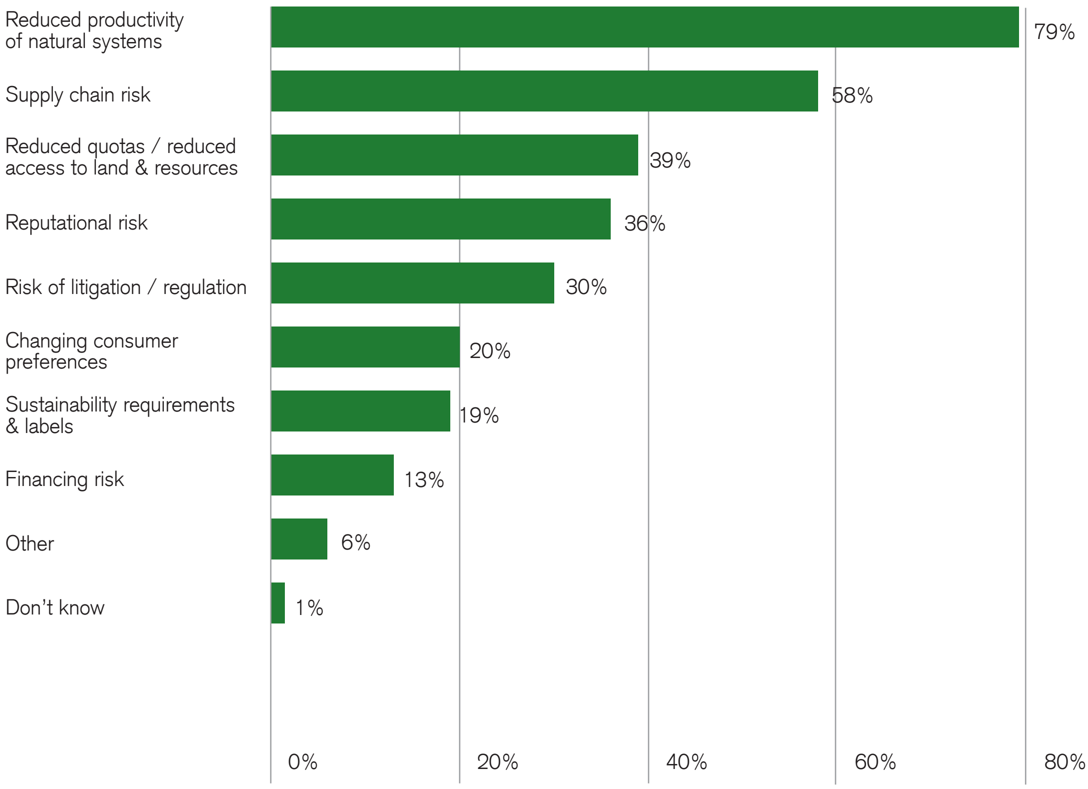
Conservation community reaction

"I think overall the respondents have got it about right. They've identified things, particularly on the agriculture and pollution side, that they have some control over and can change and influence. Other drivers like invasive species, it's much harder for an investor to see how to influence that. There are ways in which they can, but the big thing really is to change the global food production system. It's also where investors can make the most impact."

Frank Hawkins, North America Director, International Union for Conservation of Nature

Investor risk perception: business and sector risks

What are the main business risks associated with biodiversity loss?
% of respondents. 277 respondents. Respondents were asked to select their top 3.

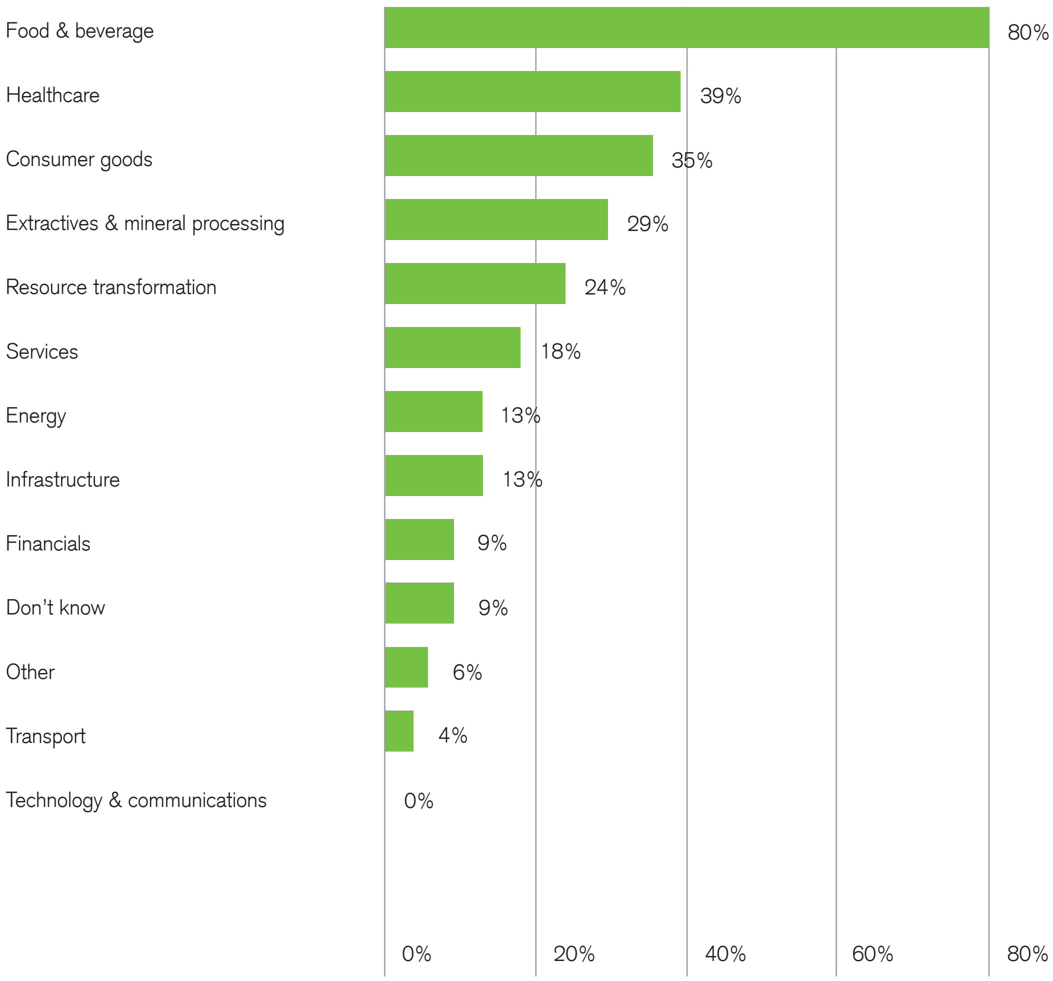


Identifying key biodiversity-linked business risks and sectors with particular exposure to biodiversity is an important step to take for investors increasingly concerned with the issue.

When survey respondents were asked to pick the top three business risks associated with biodiversity loss, a key 'winner' emerged. Almost 80% of respondents identified the reduced productivity of natural systems as the main business risk associated with biodiversity loss. As mentioned previously, a reduction of ecosystem services in a business-as-usual scenario is estimated to have huge impacts on financial markets and could wipe out trillions of dollars of global GDP. The other top three risks highlighted by survey respondents were supply chain risk and the risk of reduced quotas for extraction from natural resources, at 58% and 39% respectively.

Most respondents also identified a key sector at risk of biodiversity loss, with 8 out of 10 investors putting food and beverages in the top three sectors at highest risk of biodiversity loss. The health sector followed with almost 4 out of 10 investors identifying it as a top three risk. Consumer goods and extractive industries followed closely at 35% and 29% respectively.

Which sectors (and their supply chains) are most at risk from biodiversity loss?
% of respondents. 279 respondents. Respondents were asked to select their top 3.



Despite slow progress on global and national regulation on biodiversity and nature, 30% of respondents included regulatory risks and litigation in their top three biodiversity-related business risks. This could reflect hopes and expectations that the COP 15 on biodiversity in 2021 will lead to renewed national pledges on biodiversity that could trigger more policy and regulatory action. The launch of the TNFD is also likely to lead to discussions around whether the guidelines should be made mandatory, as has been the case with the climate equivalent TCFD.[12]

Biodiversity-related litigation processes are also starting to emerge, showing investors are right to be somewhat concerned about this. Community group Save Sydney Koala announced in July 2020 that it would take Australian construction and infrastructure giant Lendlease to court over a housing development it said would cause "fragmentation and likely extinction" of the local koala population.[13] The New South Wales government announced an AUD 84 million conservation plan to protect the koala habitat and said Lendlease would need to downsize the project if it doesn't meet the requirements of the plan.[14]

12. https://www.gov.uk/government/consultations/taking-action-on-climate-risk-improving-governance-and-reporting-by-occupational-pension-schemes/chapter-1-background-and-summary-of-proposals

13. Save Sydney Koalas, 07-072020. Available at: https://twitter.com/savesydneykoala/status/1280378962162548736 (accessed 19-11-2020)
14. https://www.abc.net.au/news/2020-08-26/nsw-government-puts-lendlease-on-notice-over-koala-conservation/12596878

The development of infrastructure is often at odds with conserving biodiversity[15] and growing concerns around biodiversity loss could lead to more stringent planning permission to curb infrastructure and energy generation development in areas of ecological importance. Despite this, only 13% of respondents picked infrastructure as a top three sector at risk of biodiversity loss.

Finance also ranked low both in business and sector risks. Just 13% of respondents listed financing risks as a top three biodiversity-related business risk, highlighting that our cohort is not immediately concerned that biodiversity loss will trigger financial losses, asset depreciation or hamper financial growth despite emerging evidence that this is the case. This could be a major barrier to investor action. If financial institutions that have already indicated some level of interest in biodiversity by participating in our survey do not identify financial risk as one of the most significant factors, this could point to a lack of incentives and urgency in addressing biodiversity in their strategies. There could also be a lack of understanding of vulnerabilities and how they might materialise in financial terms. On the other hand, it could simply indicate that other risks are at the forefront of respondents' minds, believing that other business risks will materialise faster than financial risks.

Research shows there are huge financial risks associated with biodiversity loss. As previously mentioned, the World Economic Forum estimates that more than half of the world's GDP is moderately or highly dependent on nature, while the Global Futures Initiative estimates a business-as-usual scenario will see biodiversity loss cause financial losses of USD 10 trillion between 2011 and 2050. Meanwhile, insurance industry efforts also highlight the financial significance of protecting biodiversity such as mangroves and coral reefs.[16] For example, The Nature Conservancy, AXA XL and University of California, Santa Cruz published a report in October 2020[17] saying insurance could cost-effectively help protect mangrove forests, which would reduce flood damages by USD 65 billion annually.[18]

15. Infrastructure at odds with biodiversity? WWF, IISD, 2017

16. https://uk.reuters.com/article/us-insurance-climatechange-oceans/feature-insurance-turns-to-coral-reefs-and-mangroves-as-ocean-risks-surge-idUSKCN1IF20S
17. AXA XL, The Nature Conservancy, University of California Santa7Cruz, Reducing Caribbean risk: opportunities for cost-effective mangrove restoration and insurance, 2020
18. Indebted to nature: Exploring biodiversity risks for the Dutch financial sector, DNB, 2020

AXA XL is also co-chairing the Ocean Risk and Resilience Action Alliance, a multi-sector collaboration between insurers including Swiss Re and Towers Willis Watson, governments and environmental organisations including Ocean Unite, to build resilience to ocean risk through investments in nature-based solutions.

With regards to sector risks, the financial sector again scored low on the list of concerns. with only 9% of respondents selecting it as a top three sector exposed to biodiversity risk. Recent efforts to identify biodiversity risks to financial institutions show, however, the sector is far from shielded from such risks.

Dutch central bank DNB, the first central bank to attempt to quantify financial institutions' exposure to biodiversity risk, said the EUR 510 billion (36%) of investments by the financial sector in the Netherlands is highly dependent on one or more ecosystems. A specific example highlighted is the Dutch financial sector's EUR 28 billion exposure to pollination-dependent products, meaning the loss of animal pollination ecosystems presents a clear risk for financial institutions.[19]

DNB also highlights that financial institutions are exposed to biodiversity-linked reputation and transition risks. It says Dutch institutions worldwide have contributed EUR 97 million to companies involved in environmental controversies, which could be traced back to specific company results causing reputational damage for its investors.[20]

A major failure of ecosystem services and resulting loss of production possibilities can lead to a decline in the value of investment portfolios.[21] As an example, catastrophic flooding in Thailand in 2011 affected industrial areas, in which many computer hard drive manufacturers operated and as around one-quarter of computer hard drives are produced in Thailand, the flooding caused hard drive prices to soar by 20-40% globally.[22]

Conservation community reaction

"The business risks are entirely consistent with the way I would expect the investment community to look at the situation. You have the immediate risk of your ability to continue production of commodities that come from natural resources. That's something people can see as an obvious problem caused by biodiversity loss. This has a follow on impact on supply chains. The really big factor I think will change quite quickly is financial risk. It's not manifested at all yet. Rating agencies don't yet have the tools to rate companies on their biodiversity-related risks, but this will happen. This is an externality issue - even if your personal involvement in the value chain isn't at risk, the fact that you're not accommodating the impact you're having on biodiversity will impact your cost of capital in the future. This will be a much bigger risk than anything else."

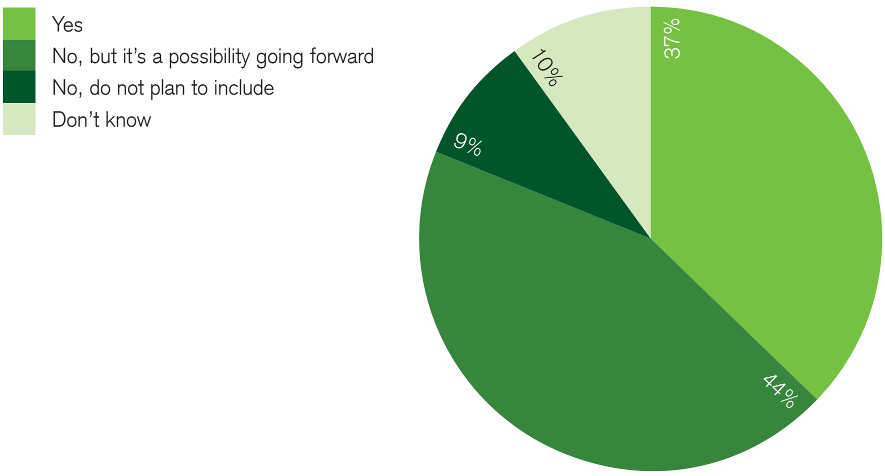
Frank Hawkins, North America Director, IUCN

19. Biodiversity Opportunities and Risks for the Financial Sector, DNB, 2020
20. https://www.dnb.nl/en/news/news-and-archive/dnbulletin-2020/dnb389169.jsp
21. Biodiversity Opportunities and Risks for the Financial Sector, DNB, 2020
22. Suttor-Sorel, 2019, as cited in Biodiversity Opportunities and Risks for the Financial Sector

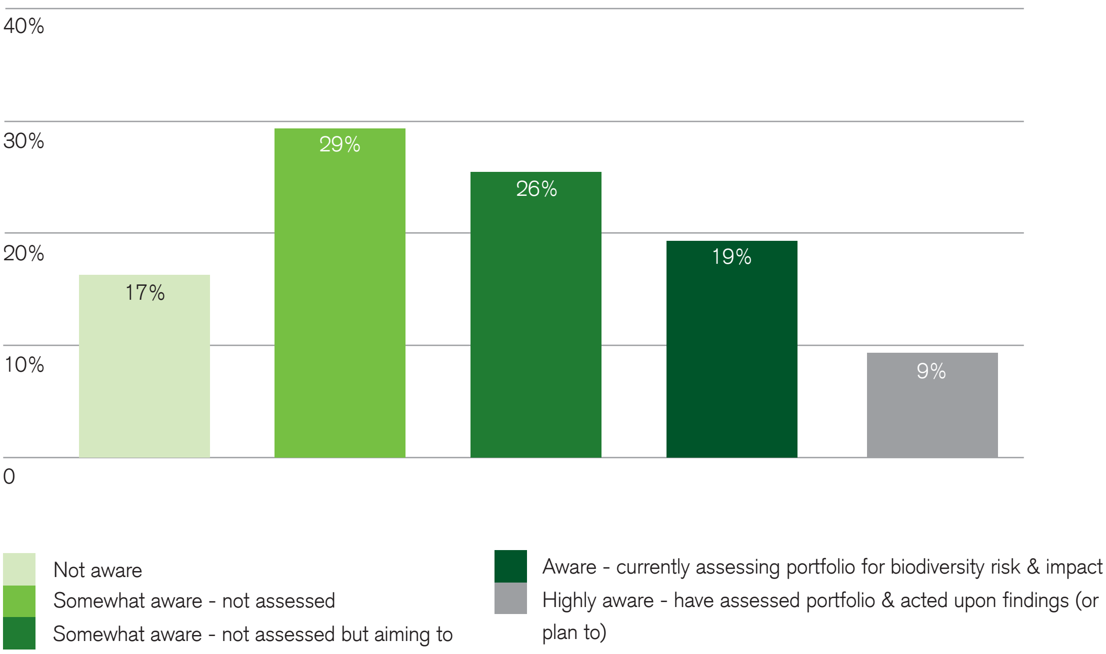
Investor action

To what extent are investors taking action on biodiversity?

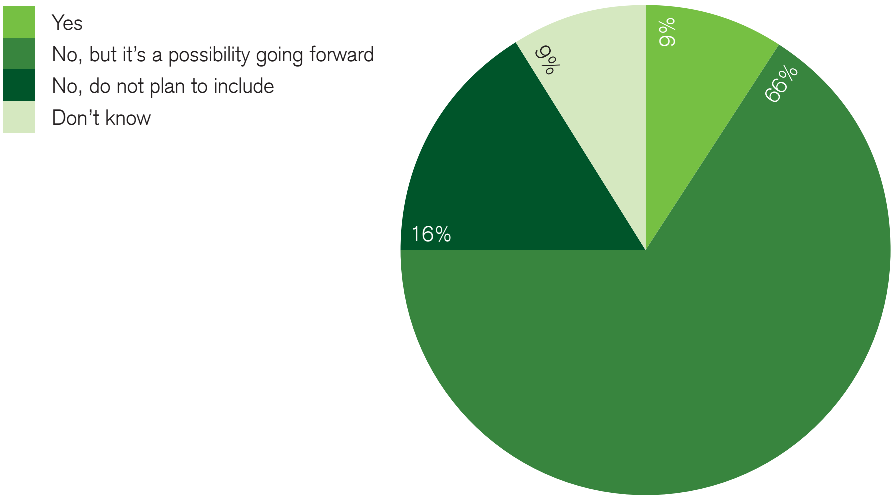
Does your investment policy consider biodiversity loss?
% of respondents. 273 respondents



How aware are you of your investments' impact on biodiversity?
% of respondents. 270 respondents



Has your organisation set any measurable biodiversity-linked targets?
% of respondents. 250 respondents



It is clear that heavy lifting will be needed if the investor community is to play its part in limiting biodiversity loss. The awareness and concern about the issue, highlighted in the previous section, are not reflected in investor strategies and policies. More than half of the respondents' investment policies do not consider biodiversity, and 72% have not assessed the impact of their investments on biodiversity.

"Biodiversity issues should be something that the entire investment community in all products asks about and tries to protect against" - US-based asset manager

Despite this, most respondents say they are already doing something to address biodiversity within their portfolios. When asked to what extent they are already addressing biodiversity themes within their portfolios, 34% said they do so by seeking to reduce negative impact; 5% through actively seeking positive outcomes and 28% through doing both (this will be explored further in the next section). Meanwhile, 27% responded they do not address biodiversity themes at all.

Respondents are also working to varying extents to begin or improve their biodiversity efforts. Some 44% of respondents said the inclusion of biodiversity in their investment policies is a possibility going forward on top of the 37% that have already done so. More than one-third of respondents that haven't yet assessed their investments' impact on biodiversity aim to do so going forward.[23] And while fewer than 1 in 10 have set measurable biodiversity-linked targets, the majority of respondents are planning to do so in the future. This reiterates that efforts to address biodiversity in investments are only just starting, and more action can be expected in the near and medium term.

At the same time, survey responses indicate that many investors are at a very early stage of considering biodiversity in their portfolios. It will likely be a challenge for investors to fully embrace biodiversity as a risk and opportunity as swiftly as they believe action needs to be taken (within 24 months, according to more than half of respondents). There is a real risk that most investors are adopting a wait-and-see strategy if they do not feel equipped to identify, assess and act on biodiversity risks and opportunities.

23. Out of the 195 respondents that have not yet assessed their investments' impact on biodiversity, 71 say they aim to do so

Investor community reaction

"Investors are much more aware of biodiversity, but are they doing anything? So far, only a select few. If you narrow it down to managers actively focusing on sustainability then yes, I do see things picking up. There's a small subset of managers leading the way on metrics, disclosure and reporting - with others waiting to see what comes out of it."

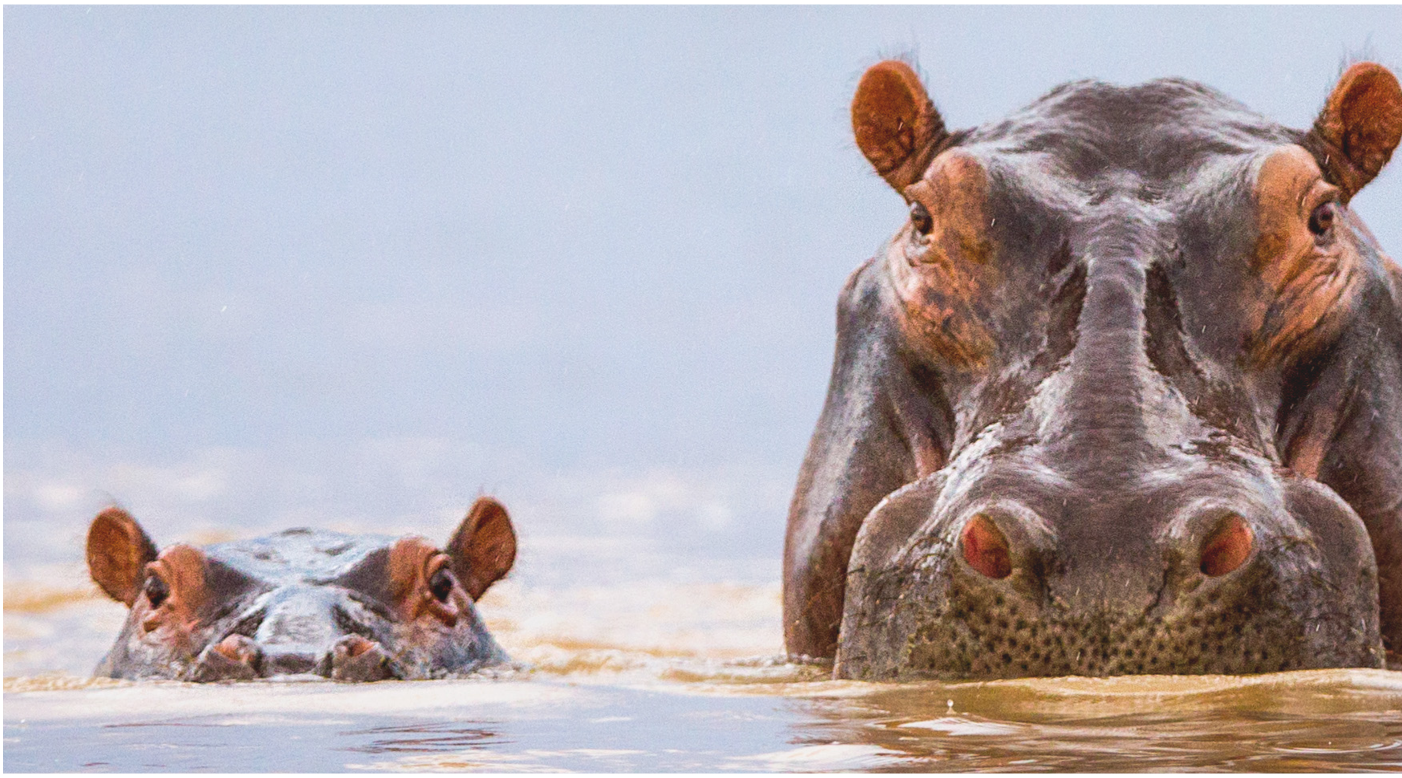
Sarika Goel, Responsible Investment Manager Research, Mercer

"We need something that we can measure and then link to our fiduciary duty. This has to be developed - while it is our duty to address anything that can be a problem for our members, we don't have the resources internally to develop biodiversity metrics, so the only thing we can do for now is something more qualitative, such as making a statement on the issue."

Nacho Hernández Valiñani, Chair, Pensions Caixa 30

"While investor interest in biodiversity has grown, more work is required across the industry to integrate biodiversity considerations into investment policies and processes. Inputs from nature and the negative impacts that were once considered as inconvenient externalities need to be considered more deeply in risk management and strategic decisions by both investors and companies."

Sonya Likhtman, Engager, EOS Federated Hermes



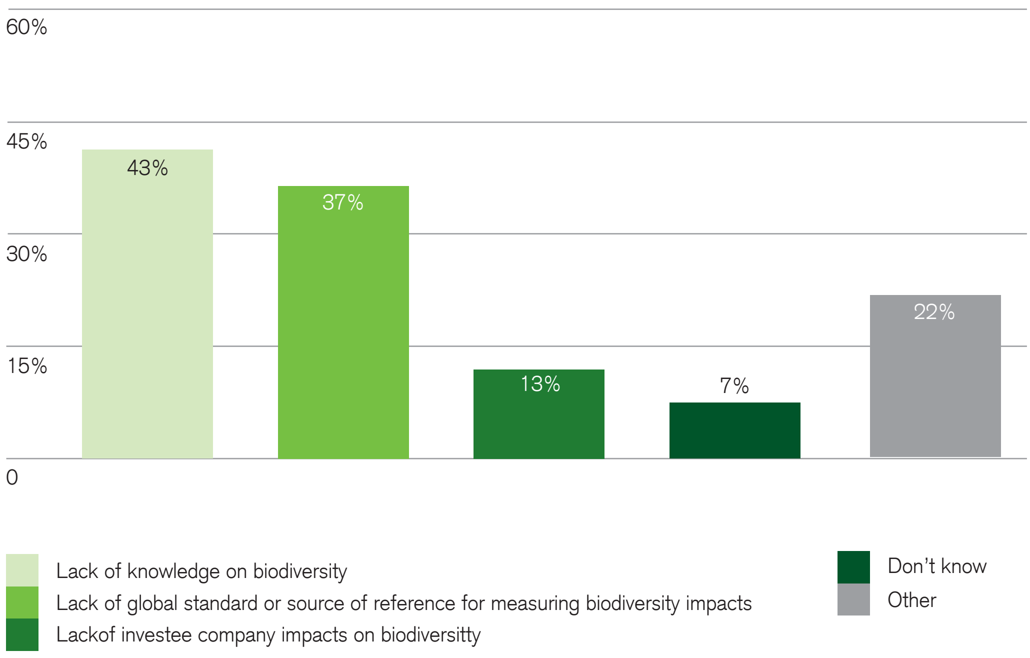
How are investors taking action now? What are some feasible first steps for investors looking to start?

An important first step for investors looking to tackle biodiversity is to assess and analyse their investments' impact on nature and wildlife, as well as their portfolio risks related to biodiversity loss. This is a data-driven process and it is crucial that investors have access to digestible data that can help them inform decisions related to biodiversity. Respondents say this largely is not the case and investors feel that a lack of data is holding them back from setting biodiversity-linked targets and seeking investment opportunities that support biodiversity.

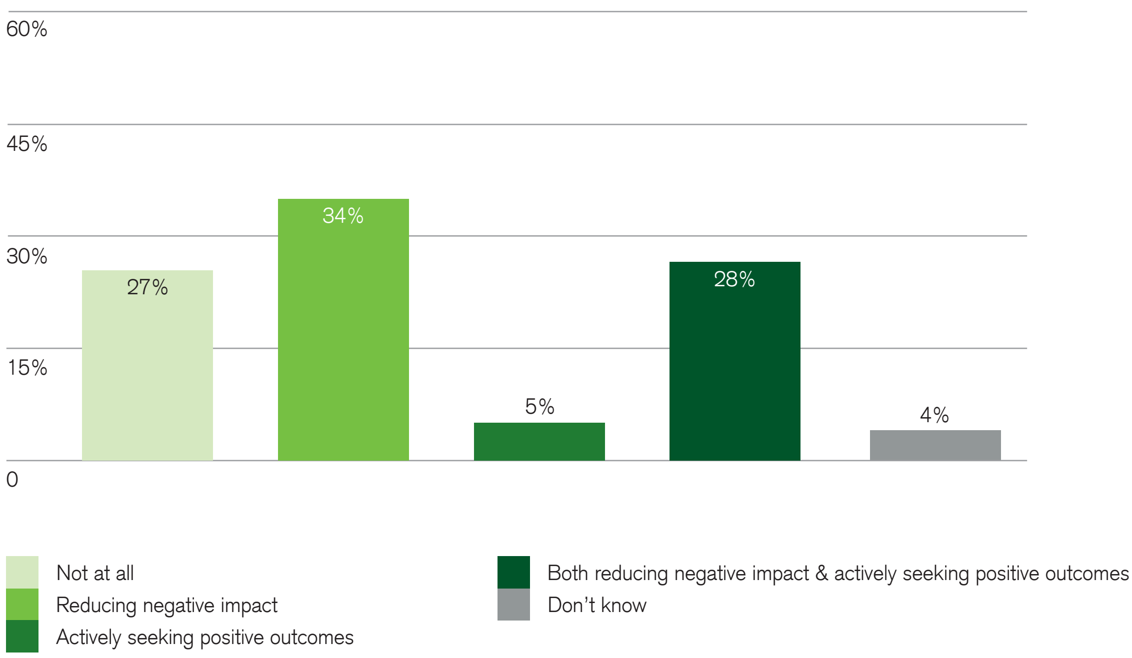
Many respondents expressed they believe a broader framework such as the TNFD, and alignment with the EU Green Taxonomy's objective to protect and restore biodiversity and ecosystems, will help them improve how they assess biodiversity risks and impacts. It should be noted, however, that the TNFD might not be a panacea: investors have been slow to take up its climate equivalent TCFD, according to its third and most recent status report, published in October 2020.[24] Regulation could help change this, with for example the UK intending to make TCFD-aligned disclosures mandatory by 2025.[25]

24. https://www.responsible-investor.com/articles/tcfd-warns-on-slow-uptake-as-it-releases-2020-status-report
25. https://www.gov.uk/government/publications/uk-joint-regulator-and-government-tcfd-taskforce-interim-report-and-roadmap

Why has your organisation not developed biodiversity-linked targets?
% of respondents. 46 respondents



To what extent are you already addressing biodiversity themes within your portfolio?
% of respondents. 260 respondents



As our survey data highlights investors believe biodiversity needs to be addressed within 24 months, what can those looking to take the first steps to address biodiversity within their portfolios learn from investors who are already doing so? Our survey gave participants the opportunity to provide open-ended responses to what metrics and data sets they use to assess biodiversity risks and impacts. A selection of varied responses follows below. The list is not intended to be a full set of approaches and datasets available to assess biodiversity factors, but a reflection of the information sources our survey respondents use.

- **CDP's forest scoring methodology**
- **Company-specific assessments of natural capital impacts**
- **Company's supply chains and business models, water use, carbon intensity and toxicity of their products**
- **Flood maps; proximity to conservation areas and easements; hazardous material assessments; sourcing responsible waste management contractors; endangered and at-risk species reports/maps**
- **GIST's natural capital assessment**
- **Integrated Biodiversity Assessment Tool (IBAT)**
- **IFC's Global Map of Environmental & Social Risk in Agro-commodity Production (GMAP)**
- **ENCORE (Exploring Natural Capital Opportunities, Risks and Exposure)**
- **TRASE - Global Canopy's supply chain transparency initiative**
- **SPOTT – ZSL's Sustainability Policy Transparency Toolkit (see box-out on page 29)**

At first glance, this might be a daunting list of different avenues for an investor at the starting point of their journey to assess biodiversity risk. Nevertheless, it emphasises that while there is currently no one size fits all approach, there are already a raft of tools, metrics and products available to at least take the first steps focusing, for example, on a select few sectors. Indeed, it highlights the need for a coordinated approach amongst market participants, something that TNFD is looking to address.

Investors are also collaborating to find new approaches to assessing biodiversity risks and impacts. France's AXA Investment Management, BNP Paribas Asset Management, Mirova and Sycomore have appointed two data providers to develop a quantitative biodiversity impact assessment methodology. Meanwhile, Dutch financial institutions including ASN Bank, ACTIAM, FMO, Robeco and Triodos Bank have partnered to develop a common accounting measure for the positive biodiversity impacts of their investments.

Respondents were also asked what company and supply chain data would help them improve their ability to assess biodiversity risk. Responses included the following themes:

- **Agricultural supply chain and land use data**
- **Deforestation rates and quantifying impacts for companies and their supply chains**
- **Corporate biodiversity footprints**
- **Disclosure of physical locations of facilities and resources needed for company operations**
- **Overall biodiversity impact assessments related to the SDGs**
- **Negative impact assessments on SDG 14 and 15**
- **Natural resource dependency impact data**

Task Force on Nature-related Financial Disclosures

The Task Force on Nature-related Financial Disclosures (TNFD) aims to redirect flows of finance at scale towards nature-positive outcomes. The initiative, catalysed through a partnership between Global Canopy, UNDP, UNEP FI and WWF, will work to resolve the reporting, metrics, and data needs of financial institutions that will enable them to better understand their risks, dependencies and impacts on nature.

In collaboration with the corporate sector, the TNFD will in 2021 develop reporting frameworks that will be tested early in 2022 before being made available worldwide.

Its Informal Working Group (IWG) includes financial institutions such as Credit Suisse from across five continents, governments and financial regulators as well as the World Bank, the OECD and a number of multinational companies. The group is tasked with establishing a detailed work plan for the Task Force for when it launches in 2021 and enabling global finance to shift from nature negative to nature positive.

Sustainability Policy Transparency Toolkit (SPOTT)

SPOTT– Sustainability Policy Transparency Toolkit – is a free, online platform supporting sustainable commodity production and trade developed by ZSL with support from inter alia Credit Suisse, who continue to act as a technical advisor. By tracking transparency against more than 100 sector-specific indicators, SPOTT incentivises corporate good practice by over 200 of the world's largest commodity producers and traders. Investors, buyers and other key influencers use SPOTT assessments to inform stakeholder engagement, manage ESG risk and encourage transparency across multiple industries.

Conservation community reaction

"There are way too many datasets out there - including SPOTT - that are overlapping and replicating each other to a certain degree. This is a function of us developing data and methodologies which seek to highlight and address specific biodiversity threats which we consider priorities as opposed to expressly building market-level tools for the financial sector. There needs to be consolidation there and we are seeing it in the market already. The TNFD will hopefully see a more common framework evolve, but we shouldn't wait around for some perfect framework to be released to the world. There is enough to work with now which can really make a difference in the short-term and the data space will evolve over time to become more efficient."

Oliver Withers, Head of Conservation Finance and Enterprise, Zoological Society of London (ZSL)

Meanwhile, biodiversity-linked targets will also be an important part of investors playing their role in limiting biodiversity loss. We asked the few respondents who have set such targets (9%) what they are and/or how they have developed them. Their varied responses follow below:

Based on engagement and number of engagements annually linked to biodiversity

Focused on nature-related SDGs and targets in the Paris Climate Agreement

For every hectare of land utilised within the portfolio, at least 1/2 ha conserved or restored

Various minimum thresholds for regions and sectors on water and waste. Minimum investments to solutions

We have conservation strategy linked to biodiversity through flagship species and protected areas

A range of approaches to target setting can be seen here, ranging from targets driven by global goals such as SDG 14 and 15 to internal strategies linked to specific biodiversity risks and metric land use and conservation goals. The latter could be helpful to financial institutions as a way to quantify the biodiversity impact of an investment.

As one respondent put it: "The metric could be one square meter of preserved land. Investors need something like this, or we'll be very hard pressed to [find] investment opportunities." Attempts are also underway to develop science-based targets for nature within the Science Based Targets Network to make it easier for companies to incorporate both climate and nature into their strategies.[26]

As noted above, biodiversity-related targets for financial institutions can take several forms and there are multiple ways in which investors can set these targets to contribute towards global and country-level goals.[27] The UNEP FI's *Beyond Business as Usual* report on how to manage biodiversity risks across sectors says a first step should be for investors to get an understanding of the highest risks and largest impacts within its activities. The report identifies priority sectors based on their potential dependencies and impacts on biodiversity and suggests investors focus on these sectors when setting biodiversity-linked targets (see box-out on page 31).

A degree of alignment can be noted between the UNEP FI's priority sectors and the sectors our cohort perceive as those most at risk of biodiversity loss. Food and beverages, consumer goods and extractives ranked 1, 3 and 4 respectively when respondents were asked to list their top three risk sectors (see page 19 for more details).

26. https://sciencebasedtargets.org/about-us/sbtn
27. https://www.unepfi.org/wordpress/wp-content/uploads/2020/06/Beyond-Business-As-Usual-Full-Report.pdf

Biodiversity targets: priority industries

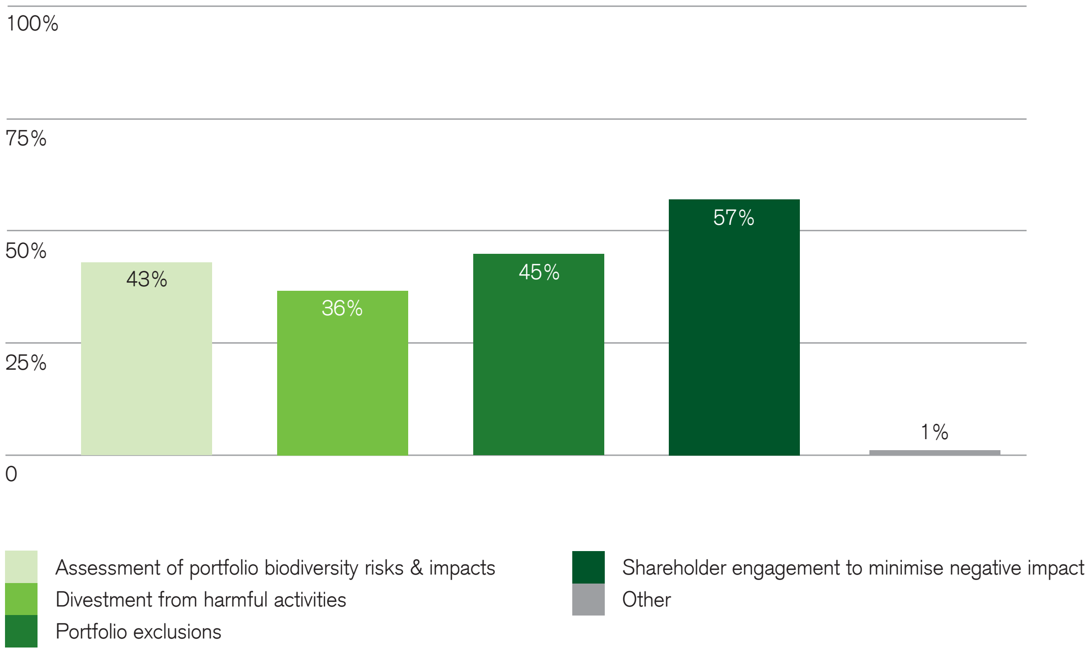
According to a UNEP FI and Global Canopy report on biodiversity targets and finance, financial institutions should focus on target setting for the priority sub-industries below (in alphabetical order):

1. Agricultural Products (priority from both impacts and dependencies perspective)
2. Apparel, Accessories & Luxury Goods (priority from dependencies perspective)
3. Brewers (priority from dependencies perspective)
4. Distribution (priority from impacts perspective)
5. Electric Utilities (priority from dependencies perspective)
6. Independent Power Producers & Energy Traders (priority from dependencies perspective)
7. Mining (priority from impacts perspective)
8. Oil & Gas Exploration & Production (priority from impacts perspective)
9. Oil & Gas Storage & Transportation (priority from impacts perspective)

Source: Beyond 'Business as Usual': Biodiversity targets and finance. Managing biodiversity risks across business sectors, UNEP Finance Initiative and Global Canopy, 2020

Reducing negative impact

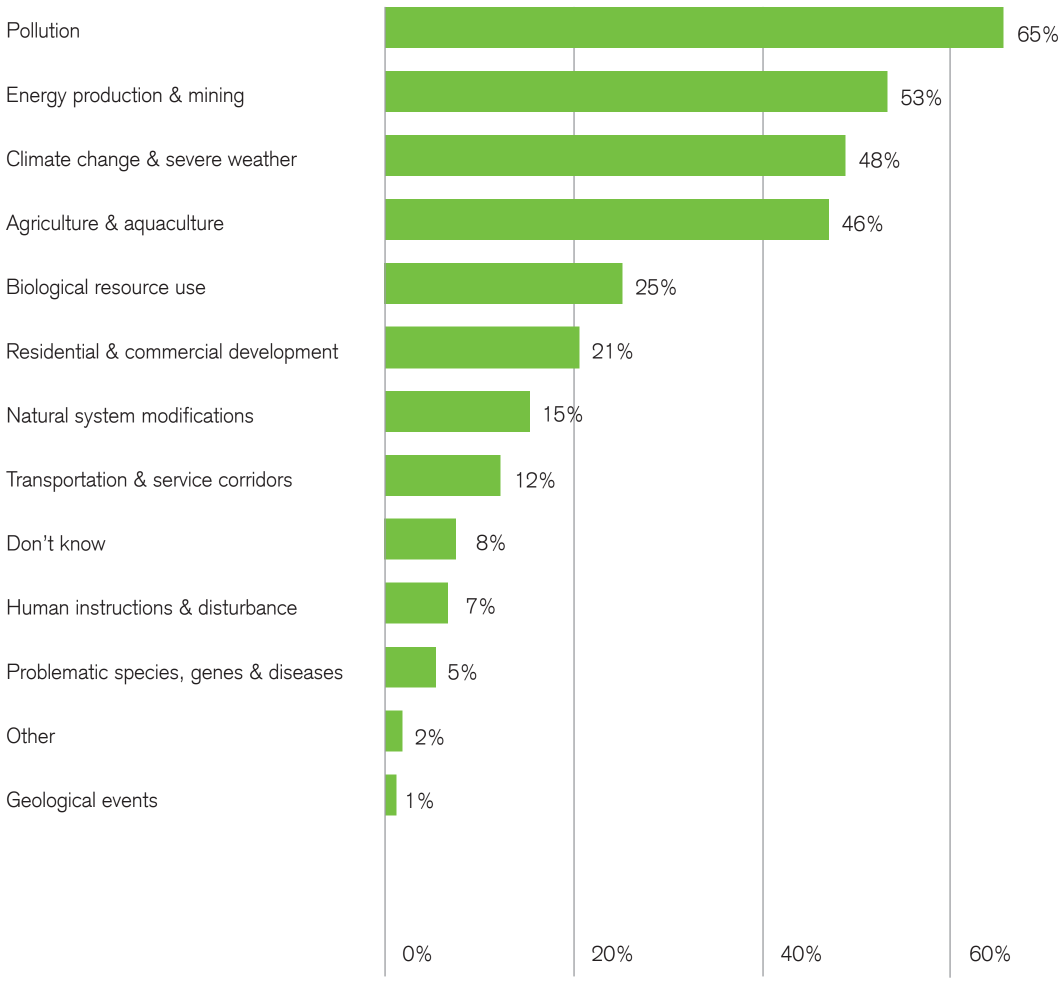
How are you reducing negative impact?
% of respondents. 83 respondents



A majority of survey respondents say they are already addressing biodiversity themes in their portfolios to some extent, and the most common way to address biodiversity among respondents is to seek to reduce negative impact, the approach of just over one-third of respondents (an additional 28% say they both reduce negative impact and actively seek positive outcomes).

Shareholder engagement is the most common way to reduce negative impact (57%). When asked which biodiversity risks investors can best influence via engagement, the top three responses were pollution, energy production and climate change. Agriculture and aquaculture, which respondents identified as the biggest cause of biodiversity loss (see page 17), followed closely but did not make the top three issues investors feel they can influence. This could be explained by some investors likely having a more extensive history of ESG engagement on energy production and climate and pollution issues.

Which biodiversity risks can investors best influence via shareholder engagement?
% of respondents. 224 respondents. Respondents were asked to select their top 3.



Engagement by respondents linked to biodiversity likely focuses on activities such as deforestation. Investor engagements that specifically aim to minimise biodiversity impact more broadly are still happening in small numbers.[28] Deforestation has attracted significant investor attention in recent years, particularly given major forest fires and other issues in the Amazon. In September 2019, more than 200 investors representing USD 16.2 trillion of AuM signed a pledge urging companies to redouble their efforts to eliminate deforestation.[29] In addition, Ceres published an investor guide to deforestation in June 2020.[30]

28. Investor Action on Biodiversity: Discussion Paper, PRI, 2020

29. Investor statement on deforestation and forest fires in the Amazon https://www.ceres.org/sites/default/files/Investor%20statement%20on%20deforestation%20and%20forest%20fires%20in%20the%20Amazon.pdf
30. https://www.ceres.org/resources/reports/investor-guide-deforestation-and-climate-change

Engaging for the Blue Economy

- Credit Suisse and Rockefeller Asset Management (RAM), with input from non-profit The Ocean Foundation, have partnered on the Credit Suisse Rockefeller Ocean Engagement Fund that will engage with portfolio companies to steer them away from ocean-harming practices.
- The focus is centered on three key ocean themes: pollution prevention, carbon transition and ocean conservation with the objective to seek financial returns while helping companies to, for example, transition away from plastic pollution, mitigate sea level rise, mitigate ocean acidification and improve sustainable fishing practices.

The focus on specific activities linked to biodiversity loss and engaging across priority sectors also highlights that the impact of biodiversity on a specific company can be difficult to pinpoint, but as investors increasingly start to look at the issue on a global scale[31] and the availability of data improves, the scope of biodiversity-linked engagement could be set to expand. In addition, there are tools available to help investors take action on sectors and issues beyond food and agriculture. For example, deforestation is increasingly throwing the spotlight on the fashion industry[32] and ZSL's SPOTT has started assessing natural rubber producers, in addition to palm oil and tropical timber and the pulp sector.

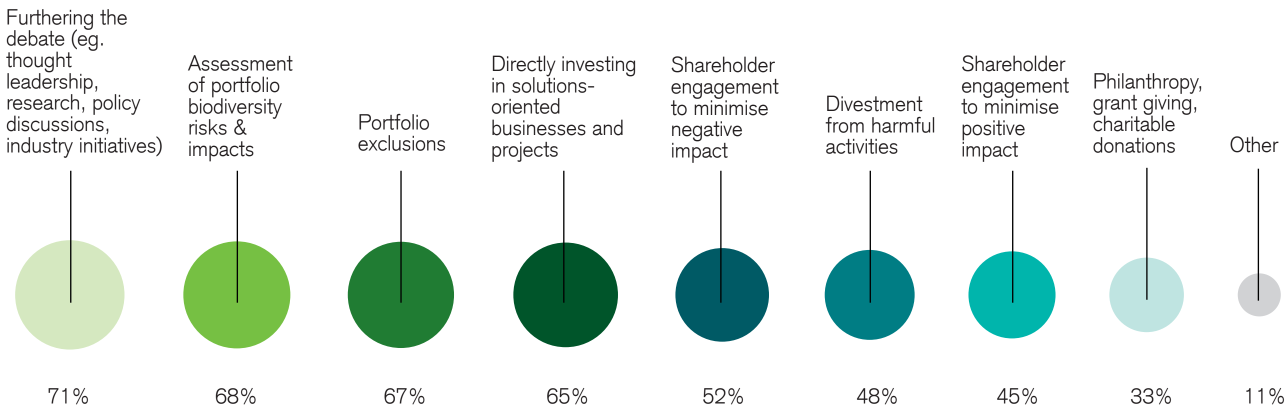
Meanwhile, the second most popular way for survey respondents to reduce negative impact is through portfolio exclusions. Some 45% of the respondents focusing on reducing negative impacts say they exclude companies based on criteria linked to biodiversity loss. There are many examples of this, with Norges Bank Investment Management having excluded a raft of companies in the past years based on its exclusion criteria of "severe environmental damage" related to, for example, deforestation and mining-related issues.[33] In addition, BMO's responsible investment strategies see it exclude companies "if they are high impact and are not able to demonstrate an understanding of their negative impacts on biodiversity and an intention, such as an appro-

31. Biodiversity and Mining among engagement themes for 2020: https://www.robeco.com/uk/insights/2020/01/biodiversity-and-mining-among-engagement-themes-for-2020.html
32. https://canopyplanet.org/amazon-joins-canopystyle-to-end-the-use-of-ancient-and-endangered-forests-in-viscose-clothing/
33. https://www.nbim.no/en/the-fund/responsible-investment/exclusion-of-companies/

priate management system, to reduce this impact to acceptable levels".[34] Slightly fewer respondents (36%) would address negative impacts through divesting from harmful activities.

Fewer than one-third of investors address biodiversity both through reducing negative impact and actively seeking positive outcomes. Out of these respondents, most (71%) say they do so by furthering the debate on the topic, for example through industry initiatives, thought leadership and research. Notably, this highlights a significant part of such investors' efforts are still at a conceptual level rather than one where they are actively making investments to promote biodiversity outcomes or manage risks. Portfolio exclusions also ranked high (67%) as an option to address biodiversity among these investors, as did direct investments in solutions-driven products and businesses (65%).

How are you reducing negative impacts and seeking positive biodiversity outcomes?
% of respondents. 66 respondents



Investor community reaction

"Risks, including those driven by biodiversity loss or other causes, are affecting investments that we already do. Perhaps biodiversity is a new externality that we need to take into account – but we've done that before with climate and other issues. Biodiversity loss is definitely not yet priced in, but it has the potential to impact investments in a material way. We're already [assessing], for example, ecological damage, deforestation, dam-related incidents in mining as well as land use in palm oil and the meat supply chain."

Piet Klop, Senior Advisor Responsible Investment, PGGM

"Broader shareholder engagement in the food and food packaging sector as well as the fashion industry often includes biodiversity-related factors. In all these sectors, you're talking about a very strong focus on their supply chains."

Sarika Goel, Responsible Investment Manager Research, Mercer

34. https://www.bmogam.com/wp-content/uploads/2020/02/responsible-investment-strategies-summary-criteria.pdf

> “Few asset managers and owners have publicly announced biodiversity investment targets, but they are starting to emerge.

Engagement in focus with Hermes EOS

Q: Can you give some examples of your biodiversity-related engagements?

Sonya Likhtman, Engager, EOS Federated Hermes: Data indicates that the rate of deforestation has increased in Asia, Africa and Latin America throughout the pandemic, so that remains a concerning issue for us. We are engaging with companies directly and as part of collaborative investor initiatives on how to eliminate deforestation from their commodity supply chains.

We are engaging with food and beverage companies on how they can encourage and support farmers in transitioning to regenerative agriculture. In these engagements, we are asking how companies will measure the outcomes of their work in terms of biodiversity, as well as carbon sequestration, water retention and other indicators.

Oil and gas companies and other carbon-intensive sectors are increasingly looking to nature-based solutions as part of their decarbonisation strategies. We want to test the extent to which the proposed nature-based solutions also deliver positive biodiversity benefits.

Q: How can investors engage with companies specifically on minimising biodiversity impact (as opposed to engaging on biodiversity-linked topics such as deforestation)?

SL: We have been developing our expectations of companies and stepping up our engagement on biodiversity. For many companies, the first step is understanding how biodiversity and ecosystem services are relevant to their business model, be this through their sourcing practices and supply chains, in the construction of new sites, or through the way their operations interact with surrounding ecosystems. To get a better picture of this, we're asking companies to assess their impacts and dependencies on biodiversity. Identifying areas where the company is negatively impacting biodiversity is a first step to mitigating and reversing the negative impact. Understanding how the business is dependent on biodiversity and ecosystem services is an important aspect of risk management.

We've been trying to bring biodiversity to the heart of engagements. As best practice, we are encouraging companies to commit to having an overall net-positive impact on biodiversity at the organisational level. This is challenging, but given the extent of biodiversity loss, we know that conserving what remains is likely to be insufficient. The goal should be accompanied by strong governance, effective measurement, an impactful strategy and regular disclosure.

Seeking positive outcomes: how investible is biodiversity?

The universe of investment opportunities generating positive biodiversity outcomes mainly comprises investments that are perceived as too small and risky for mainstream investors. "On the opportunity side we're struggling with this," says Klop at PGGM. "We find it really hard to come up with investable ideas around SDG 14 and 15. It doesn't mean we don't see the need or economic rationale but it's so hard to find investments that fit our risk appetite."

"The opportunity set for investing in biodiversity and natural capital is still very small," Sarika Goel, Responsible Investment Manager at investment consultant Mercer, agrees. "Currently we've seen a few ideas on the private markets side and a few in listed equities but this is an area where we're hoping to see a lot more growth."

Notably, Credit Suisse, in partnership with Rockefeller Asset Management, in September 2020 launched a listed equities fund focused on the sustainable blue economy. The Ocean Engagement Fund is the first impact fund dedicated to ocean health and in line with SDG 14 (see box-out on page 34). Meanwhile, there are a number of private funds - more likely to consider small-scale opportunities and take on more risk than listed strategies - focused on biodiversity, including the Althelia Funds, backed by Mirova, and the Moringa Partnership, backed by Edmond de Rothschild Private Equity.

In the fixed income space, a number of bonds specifically focusing on positive outcomes linked to biodiversity have been issued but it remains a small part of the wider green and sustainability bond market - which itself represents a fraction of issued bonds.[35] Early movers including the TNC's debt-for-nature swaps and ZSL's Rhino Impact Investment Project developing the wildlife conservation bond (see box-out on page 39). These examples have shown there is investor demand for biodiversity-linked fixed-income instruments.

Few asset managers and owners have publicly announced biodiversity investment targets, but they are starting to emerge. Natixis Investment Management announced in June 2020 it aims to reach EUR 2 billion of AuM for strategies dedicated to natural capital and the preservation of water resources through funds managed by its asset management arms.[36]

Dutch ASN Bank aims to have a net positive biodiversity impact by 2030, but its senior advisor on biodiversity Roel Nozeman said in March 2020 that every company it had assessed

35. Emerging Markets Green Bonds Report 2019, Amundi and IFC, 2019
36. https://pressroom-en.natixis.com/news/natixis-mobilizes-its-business-lines-in-support-of-biodiversity-0b30-8e037.html

so far has a net negative impact on biodiversity. The bank and a number of other Dutch financial institutions have joined forces to develop a common accounting measure for the positive biodiversity impacts of their investments.[37] The Partnership Biodiversity Accounting Financials (PBAF) mirrors the carbon accounting initiative PCAF launched by ASN in 2015.

Investors are also working to improve their inclusion of biodiversity in broader sustainable investing funds or strategies. For example, Pictet Asset Management has in partnership with the Stockholm Resilience Centre (SRC) developed a way to apply the SRC's Planetary Boundaries framework to its investment decisions.[38] Pictet says the framework, which quantifies the environmental impact for every USD 1 million of annual revenue businesses generate, highlights companies that actively make a contribution to solving environmental problems and help others reduce their footprint. Natixis's Mirova Natural Capital is, in collaboration with IUCN and the Global Environment Facility, launching the Nature+ accelerator that will use the IUCN's Species Threat Abatement and Restoration metric to select investments and monitor impacts that will contribute to the post-2020 biodiversity framework.[39, 40]

Shifting investor focus from reducing risk and negative impact to actively sourcing investments in projects and companies supporting wildlife and nature is an important part of addressing biodiversity loss. In 2019, global spending on activities that benefit nature reached between USD 124 -143 billion, estimates The Nature Conservancy.[41] While it represents almost three times the spending in 2012, it is nowhere near enough: the TNC estimates annual spending of USD 722 - 976 billion is needed to reverse the decline in biodiversity by 2030.

The Rhino Impact Investment Project

- The Rhino Impact Investment (RII) Project, with support from Credit Suisse, is working to develop a financial instrument targeting species conservation.
- The aim is to mobilise new private capital for conservation and to shift the conservation funding model to deliver improved management and cost effectiveness.
- The development of the RII Project was funded by the Global Environment Facility (GEF) through the United Nations Development Programme (UNDP), Oak Foundation, Rufford Foundation, the UK Government through the Illegal Wildlife Trade Challenge Fund, The Royal Foundation of the Duke and Duchess of Cambridge and the Zoological Society of London.

37. https://www.responsible-investor.com/articles/dutch-financials-join-in-biodiversity-impact-measurement-push
38. https://www.am.pictet/en/uk/global-articles/2020/expertise/thematic-equities/planetary-boundaries-and-environmental-footprint-of-businesses
39. https://www.iucn.org/theme/nature-based-solutions/initiatives/nature-accelerator-fund
40. https://www.iucn.org/regions/washington-dc-office/our-work/species-threat-abatement-and-recovery-star-metric
41. Financing Nature: Closing The Global Biodiversity Financing Gap, The Nature Conservancy, 2020 https://www.nature.org/en-us/what-we-do/our-insights/perspectives/closing-nature-funding-gap-global-biodiversity-finance

> Investors may be ready to address biodiversity, but there's a long way to go for their concern and awareness to be translated into real investments supporting wildlife and nature.

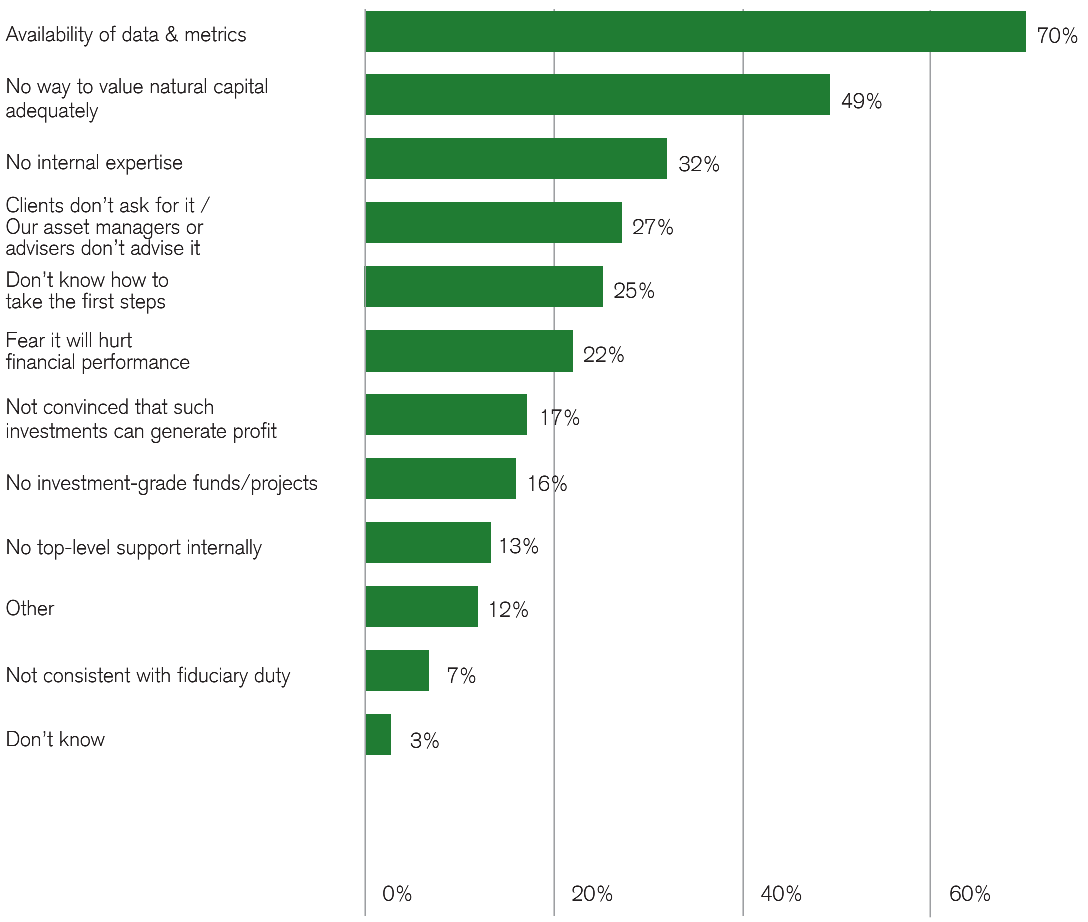
Scaling up biodiversity investing

What are the key barriers and how can they be overcome?

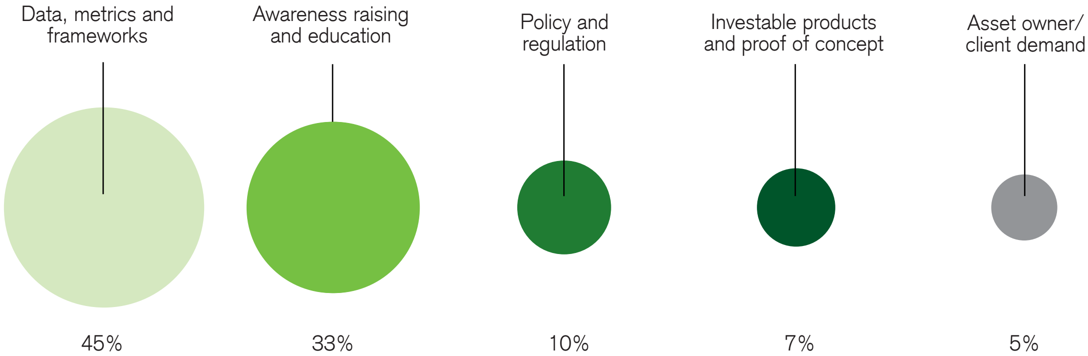
A majority of our cohort believe biodiversity will be one of the most important investment topics in 10 years, yet fewer than one in 10 have biodiversity-linked targets and even fewer (5%) are exclusively addressing the theme through actively seeking positive outcomes. This sends a stark message to global policy makers and the conservation community: investors may be ready to address biodiversity, but there's a long way to go for their concern and awareness to be translated into real investments supporting wildlife and nature.

Part of this challenge relates to a lack of understanding of the topic. While there are several barriers holding investors back from the theme, there are still a large number of investors who cite lack of knowledge as a key barrier. When respondents were asked why they had not set biodiversity-linked targets, the most common reason was lack of knowledge (43%). One-quarter of respondents say they don't know how to take the first steps to make investments to support biodiversity, highlighting that many financial institutions are at the very beginning of

What are the barriers to investments supporting biodiversity?
% of respondents. 222 respondents. Respondents were asked to select their top 3.



What is needed to mainstream biodiversity investing?
% of respondents. 163 respondents. Investors were asked to provide open-ended responses which broadly fell into these categories.



trying to understand biodiversity and put it in an investment context. Around one-third of respondents cite a lack of internal expertise as a barrier to investments supporting biodiversity. This is an opportunity for conservation experts alongside early movers in the investment space to continue to help make the topic more digestible for investors.

“More education, broadly accepted data sets and frameworks, more investable projects, broader discussion and options from asset managers.“ - US pension fund

“More information needed on how to apply biodiversity as an investment theme [...] what are its practical implications for specific sectors” - Finnish pension fund

When respondents were asked to provide open-ended responses to what is needed to mainstream biodiversity investing most responses broadly fell into five categories:

- Data, metrics and frameworks (45%)
- Awareness raising and education (33%)
- Policy and regulation (10%)
- Investable products and proof of concept (7%)
- Asset owner/client demand (5%)

Data, metrics and frameworks

A lack of data, standards and metrics for measuring risks and impact is another important barrier, particularly to ensure investors who have started looking at biodiversity to various extents can take steps such as setting biodiversity-linked targets and develop investment strategies focused on supporting biodiversity. Availability of data was cited as the top barrier (70%) to investments supporting biodiversity. As shown in the previous section, data also topped the list when respondents were asked to provide open-ended responses to what steps are needed to make biodiversity investible for mainstream investors.

In order to show a variety of investor responses related to why and how data, metrics and frameworks will help drive investment in biodiversity several quotes have been included below. The responses were to the question **What steps need to be taken to make biodiversity investible for the mainstream investor community?**

“Climate change impacts biodiversity so it is indirectly addressed and this seems a consensus approach. More data on how to influence this directly would help.“
- UK-based asset manager

“Investment-grade data. Rigorous quantification of the cost of getting it wrong and discrete decisions we can make to get it right. Move beyond “feel-good” conservation stories into rigorous impact metrics.”
- US-based asset manager

“The development of clear and generally agreed impact indicators (positive and negative) that can allow tracking portfolio performance on these non-financial metrics.”
- German insurer

The clear focus on challenges with available data to guide investment decisions highlights that while biodiversity investing is still far from being a mainstream investment opportunity, relatively few investors believe the theme is completely uninvestable. Instead, financial institutions need better data and more expertise on the subject, which is in line with conservation and industry efforts to boost biodiversity investments.

This is a crucial time for these initiatives to take shape and, importantly, for experts and investors to communicate to ensure any framework and data tools are as straightforward to use as possible for investors across different asset classes.

To put it in the words of one respondent: “It is going in the right direction, it just needs to be faster. More data, more initiatives, more awareness.”

Investor community reaction

"While we all realise that biodiversity is increasingly under threat, I am not surprised to hear that few investors are considering the relationship between their investments and biodiversity. The reason is that impacts on biodiversity are extremely hard to measure. It's not like water usage or energy usage or carbon emissions which have clear indicators. If you think about how different sectors may impact biodiversity, the possibilities are vast. For example, the decline in honeybees has been attributed to things ranging from electromagnetic pollution caused by cell phones to agricultural pesticides and plenty of industries in between. On the flip side, one industry alone may have impacts on a multitude of species on land and under water around the world. Tools such as MSCI ESG Carbon Portfolio Analytics have made it easy for investors to measure the carbon footprint of their investments. Doing the same thing for biodiversity will involve identifying measurable indicators and turning complex methodologies into credible tools that are easy to use."

Mia Overall, Senior Vice President and ESG Engagement Lead, Rockefeller Capital Management

Developing investment products for positive biodiversity outcomes

At first sight, it is encouraging that barriers related to the availability of investments rank relatively low on the list of barriers for investors to invest in the theme, with 16% of respondents citing the lack of investment-grade funds and projects as a barrier to investment and only 7% saying such investments would not be in line with fiduciary duty.

However, the lack of investment opportunities related to positive biodiversity impacts should not be underestimated. Relatively few respondents mentioned it as a barrier but an explanation could be that most of them are not yet at a stage of even considering such investments, as shown by the fact that only 5% actively seek positive outcomes as a way to address biodiversity, and fewer than one-third do so in combination with reducing negative impact. Meanwhile, 22% of respondents fear investments in solutions supporting biodiversity will hurt their financial performance, highlighting a perceived lack of suitable investment opportunities. Despite most respondents highlighting a lack of data and knowledge as barriers to investing in biodiversity rather than its investability, there is a risk that when they obtain that data and knowledge, there is little for them to invest in that supports biodiversity. These are a few of the investor views voiced in the survey responses:

“I don’t know of a single investment that has biodiversity protection as its objective - I think that if we build it they would buy it. Biodiversity issues should be something that the entire investment community in all products asks about and tries to protect against”
- US-based asset manager

“We need more scalable projects with a sound business case on the private debt and equity side and we need a better way to measure positive biodiversity outcomes on the stock-listed investments side.”
- Netherlands-based asset manager

The Cumberland Forest Fund

In 2019, The Nature Conservancy's investment arm NatureVest reached financial close on a private investment fund to acquire 253,000 acres of forests in Virginia, Kentucky and Tennessee. The fund is targeting positive impacts linked to sustainable forest management, long-term protection, carbon sequestration, recreational access, and local economic development.

In its first year of operation, fund outcomes include:

- As of June 2020, the fund had secured permanent protection of 9% of its total acreage by placing a 22,856-acres open-space easement held by the Virginia Department of Forestry
- FSC certification for the entire forested area
- Sequestering 2.2 million tCO2e of carbon emissions (based on the California Air Resources Board Offset Credits issued to the fund).

The involvement of development banks and multilateral development banks (MDBs) could also help boost the pipeline of investment opportunities. This is happening, albeit still at a relatively small scale - the World Bank Group's *Mobilizing Private Finance for Nature* report says MDBs and donor organisations can "step up, target, and innovate in their own approach to providing finance for biodiversity conservation".[42] MDBs are in a position to create new mechanisms for biodiversity finance, promote blended finance solutions for biodiversity and develop accountability and reporting standards for biodiversity protection, it adds.

Examples of MDB initiatives related to biodiversity include the EIB's Natural Capital Financing Facility (NCFF), which offers funding to a range of projects that support biodiversity within the EU.[43]

To help projects get off the ground and monitor outcomes it also offers EUR 1 million technical assistance grants. Its investments include the backing of the SLM Silva Fund focusing on sustainable forestry in Ireland and a loan to Caisse des Dépôts subsidiary CDC Biodiversité's biodiversity offsetting scheme. The European Bank of Reconstruction and Development has supported a number of biodiversity capacity building programmes in the countries in which it operates[44] and the Asian Development Bank (ADB) is a key player in initiatives to improve conservation in the Greater Mekong region.[45]

Specialised funds with a biodiversity expertise can also help build capacity and attract more institutional capital to projects supporting biodiversity. Similarly, biodiversity-linked bonds (see examples and case study on page 38 and 39) are an opportunity to help make small-scale investments more accessible to institutional investors.

42. http://pubdocs.worldbank.org/en/916781601304630850/Finance-for-Nature-28-Sep-web-version.pdf
43. https://www.eib.org/en/products/mandates-partnerships/ncff/index.htm
44. https://www.ebrd.com/work-with-us/projects/tcpsd/11532.html
45. https://www.adb.org/documents/core-environment-program-and-biodiversity-conservation-corridors-initiative-GMS

Policy and regulatory potential

Progress by policy makers and regulators so far to address biodiversity is far from encouraging. None of the 20 targets set by global governments at COP10 in Aichi have been fully met.[46] Despite being intertwined with climate change risk, biodiversity loss has comparatively lacked scrutiny in the past decade.

But this is changing rapidly. While the COVID-19 outbreak somewhat stood in the way of 2020 being a 'super year for nature' in terms of governments physically meeting at COP 15 for biodiversity in Kunming, China to set new targets - this has been postponed to 2021 - it has not prevented the topic from finally making its way up the agenda on international and national policy scenes.

As The Nature Conservancy's highlights in its report on closing the nature funding gap[47], much of the funding needed to protect nature originates in the private sector, but governments need to set the conditions and incentives for funding to flow in ways that generate positive outcomes for nature. Despite this commentary, only 1 in 10 respondents to our survey highlighted policy and regulation in their open-ended responses to what is needed to mainstream investments supporting biodiversity.

This could indicate, similar to the low rate of responses mentioning investability hurdles, that few investors are actively trying to identify biodiversity related opportunities and are yet to evaluate the policy landscape. It could also be a reflection of the slow policy and regulatory progress on biodiversity and its funding to date.

Respondents who did mention policy and regulation in their responses called for efforts ranging from government assessments of biodiversity risks, national level natural capital accounting, scaling up public biodiversity financing, global pricing on pollution and ecosystems degradation, and promoting investments with positive biodiversity outcomes.

National level natural capital accounting could help governments to understand the dependence of the economy on nature, identifying key natural capital assets and sources of their degradation and informing the risk assessment above. This information could be used to identify sectors which particularly impact or depend on natural capital and to require them to safeguard these assets. - UK-based asset manager

Encouragingly, policy makers are increasingly starting to look at links between biodiversity and financial markets. To prepare for the upcoming COP 15, the UK government in 2019 launched an independent review into the economics of biodiversity led by Professor Sir Partha Dasgupta.[48] France's Secretary of State to the Ministry for the Ecological and Inclusive Transition has called for nature to be a critical part of disclosure.[49] And, as highlighted in our report (see page 21) the Dutch central bank has published research on biodiversity risks and opportunities for the financial sector.

Meanwhile, public finance flows to support biodiversity are incredibly small. The OECD estimates that between 2015 and 2017, 81 countries collectively spent an average of USD 68.7 billion per year on biodiversity finance.

46. Global Biodiversity Outlook 5,Secretariat of the Convention on Biological Diversity, 2020
47. Financing Nature: Closing the global biodiversity financing gap, The Paulson Institute, The Nature Conservancy, and the Cornell Atkinson Center for Sustainability, 2020
48. https://www.gov.uk/government/collections/the-economics-of-biodiversity-the-dasgupta-review
49. https://www.responsible-investor.com/articles/nature-needs-to-be-a-critical-part-of-disclosure-french-government-joins-push-on-biodiversity

International public expenditure in the time period made up between roughly USD 4 - 9 billion per year. This, combined with up to USD 13.6 billion of private finance in the period puts the estimate of global biodiversity finance to about 0.1% of global GDP.

If new national pledges are signed at COP 15, this could be a turning point for biodiversity policy and regulation as well as public finance.[50] Investors will be watching the negotiations closely but, for now, relatively few respondents see regulation as a key driving force to mainstream biodiversity investing.

Conservation community reaction

"This is very surprising given that those of us in the sector see it [policy and regulation] as the single biggest driver to mainstream biodiversity investing. We see growing interest but there's a huge risk that we won't be able to capture the opportunity that engagement presents because of insufficient deal flow and regulatory support."

Charlotte Kaiser, Managing Director, NatureVest, The Nature Conservancy

Investor community reaction

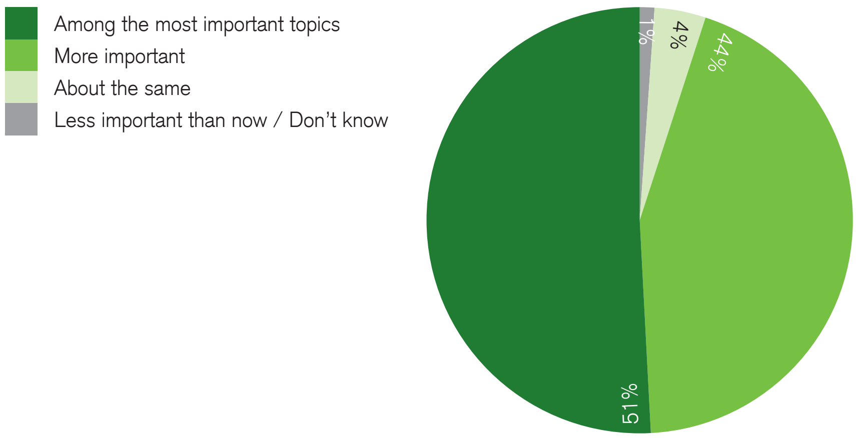
"Biodiversity loss is a risk so we have to address that risk regardless of policy and regulatory drivers. But if we look from an opportunity perspective, regulation becomes really, really important. Without the right policy environment and incentives, it is unlikely that investments supporting biodiversity will be a major source of return for investors. Some solutions that are already out there, such as reforestation, are simply too niche for most investors without some kind of regulatory driver."

Nacho Hernández Valiñani, Chair, Pensions Caixa 30

50. A Comprehensive Overview of Global Biodiversity Finance, OECD, 2020

Conclusion

Where do you see the topic of biodiversity within the investment world by 2030?
% of respondents. 229 respondents



Investors are increasingly recognising the seriousness of biodiversity loss and how it will have devastating societal and financial impacts unless swift action is taken. Despite this, most have not yet assessed the impacts of their investments on biodiversity or set measurable biodiversity-linked targets.

The majority of respondents say they need more data and, to a slightly lesser extent, more subject knowledge to be able to better address biodiversity. This report outlines specific types of company and supply chain data respondents believe would help them improve their ability to assess biodiversity risks. Meanwhile, survey responses also highlight that some are waiting for broader, more streamlined initiatives like the Task Force on Nature-related Financial Disclosure (TNFD), hoping such efforts will make it easier for them to address biodiversity in their portfolios. While no single initiative will be a panacea, our survey shows that most respondents do not feel fully equipped to tackle biodiversity and make related investments: they believe biodiversity must be made more digestible and measurable for mainstream investors to be able to truly take action.

As investors become more aware of and concerned about biodiversity, it is crucial to ensure this leads to a reallocation of investments into companies, projects and solutions that benefit nature and wildlife. Specialist investors and some early movers from the mainstream investment universe are leading the way here. For now, most investors say they are hard-pressed to find investment opportunities supporting biodiversity suiting their risk profiles - as many as one-quarter of respondents do not know how to take the first step to make such investments and some even say they have never come across a biodiversity-linked investment opportunity. Collaborations between private investors, NGOs, multilaterals and public sector actors to create such investment products and finance vehicles will be crucial to build an investment pipeline and accelerate investments supporting biodiversity.

It is clear that huge efforts are required to move the needle on biodiversity in the investment world. Equally, it is evident that the subject has shot up the agenda of investors and the time to capture their increased concern is now.

Encouragingly, investment opportunities supporting biodiversity are starting to emerge and some investors have launched pioneering efforts to better address biodiversity in their portfolios. Our survey also shows that respondents are largely aware of the most significant contributors to biodiversity loss and could identify key business and sector risks associated with the issue. Arguably, they may have underestimated the risks to the financial sector, or the responses are a reflection of the most immediate risks they fear could materialise in sectors directly and highly exposed to biodiversity loss, such as agriculture.

Not only is the sense of urgency there, but investors believe biodiversity is a theme that will remain significant to financial institutions in the longer term. A majority predict biodiversity will be one of the most important topics in the investment world in 2030. Combined with a policy momentum and major efforts by the conservation community to collaborate with financial actors this could mean biodiversity finally gets the attention and scrutiny by investors that it deserves.

About the photographer

Will Burrard-Lucas

Will Burrard-Lucas is a wildlife photographer. He spent part of his childhood in Tanzania where he first developed a love of nature. He developed an interest in photography while at university and then started focusing his lens on the natural world.

Burrard-Lucas is an advocate for wildlife conservation and works with various conservation non-governmental organizations, including WWF, African Parks and ZSL. His work has been featured by numerous international media outlets including The New York Times, the Guardian, the Telegraph, the Washington Post, National Geographic, CNN and BBC.

In 2009, Burrard-Lucas created the BeetleCam, a remote-control camera buggy that enables photographers to take close-up photographs of wildlife. He has developed a high-quality camera trap system for photographing rare and nocturnal animals, and is the founder of Camtraptions, a company specializing in products for remote and camera trap photography.

Burrard-Lucas' images of a black leopard in Kenya made headlines around the world in 2019 when they accompanied the first scientifically-documented sighting of this rare animal in Africa in over 100 years. A book based on his experience, The Black Leopard, has recently been published.

Website: willbl.com
Follow: @willbl

Cover Image Caption

I captured this endearing moment between a mother rhino and her calf at Lewa Wildlife Conservancy in Kenya. I was photographing black rhinos and on this particular afternoon, I was thrilled to find this family on a beautiful grassy plain.

Black rhinos usually favour the thickets, where it can be difficult to get close enough for an intimate encounter. While rhinos have poor eyesight, they have an incredible sense of smell and acute hearing. They are also feisty. If you are in a vehicle, they will hear the approaching engine and run for cover. If you approach on foot, you must be downwind so they cannot catch your scent. You must not crunch vegetation underfoot - an uncertain black rhino will charge at a perceived threat without hesitation or warning. On two hair-raising occasions, I've been forced to rapidly climb a tree after spooking a black rhino I was tracking on foot!

This time, luck was with me. I judged the direction the rhinos were heading in and positioned my vehicle well in front of them. The mother rhino often paused to browse on low acacia shrubs, so I stopped next to one I hoped she would find appetizing. I waited with bated breath, conscious not to make any noises or sudden movements that might spook her. Just as I hoped, she paused in front of me to munch on the acacia. I carefully lowed myself out of the door to get a lower perspective for a shot that included the undulating grasslands of Lewa in the background.

The calf soon caught up with the mother and they started feeding from the same bush. A wonderful fleeting moment materialized; the mother snipped off a sprig and started to munch on it just as the calf went for the same branch. They lifted their heads in unison and ate the sprig from both ends. Within a few seconds it had been devoured and the rhinos were on their way again.

My ambition

The images in this report span the globe and bear witness to my travels as a wildlife photographer, taken over the course of more than 15 years. In that relatively short space of time, I've witnessed the plight of the natural world first hand.

Last year I visited a part of southern Tanzania; due to poaching, the elephant population has fallen more than 80% since my last visit there in 2004. I first visited Madagascar in 2010 to photograph the island's wonderful menagerie of endemic species (animals and plants found nowhere else on earth). I returned in 2018 and was dismayed to learn that more than 12% of Madagascar's primary forest has disappeared in just eight years.

Even in Antarctica, the remotest corner of earth, where humanity seems so distant, the ecosystem is changing at an alarming rate due to climate change. Nesting colonies of Gentoo penguins are getting larger, while those of Adélie penguins are shrinking dramatically as the adaptable Gentoos can cope better with warmer, wetter conditions.

It is easy to feel helpless in the face of vast, global challenges such as climate change and an ever-expanding human population. But when the plight of the natural world seems most bleak, it is the example set by conservationists, working tirelessly on the frontlines, which inspire me to use my photography to aid conservation efforts whenever possible.

I hope my images can foster a sense of wonder and inspire people to care more about our incredible planet. It is my wish that they illustrate how much of the natural world remains that can be saved. This is so empowering - I hope it might serve as a source of inspiration for you too.

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