

This paper continues our [Reporting on Nature](#) series. As companies navigate the change from voluntary reporting to legal compliance, we take a look at some of the foundations upon which our understanding of nature is built, and the corporate responses that need to follow.

First, Some Provocations

For global companies it is tempting to build a narrative about their approach to nature and biodiversity that reflects their global view. Yet this leads to a framing around dependencies, impacts, and risks, that focuses upon potential rather than the actual. In this provocation we suggest how a better articulation can improve corporate reporting on nature and biodiversity. In brief, we argue for:

- more nuanced conversations about the ‘state of nature’
- recognition that nature is dynamic and the need to think about connectivity across landscapes, not just the status of discrete habitats
- better understanding of nature dependencies, and
- more careful consideration of actual risk

The more nuanced reflection on the State of Nature

The 2024 [WWF Living Planet Report](#) (LPR) headlines a 73% reduction in the average size of wildlife populations. But some caution is required in how to interpret this statistic. In particular, the 73% figure is a global average: the actual picture is more nuanced. Since about 2012 global decline has levelled out. While 50% of the populations are indeed declining, 43% are growing and 7% are stable.

The LPR graph does not easily illustrate that levelling off, as the graph uses a log scale. It is the same with the Intactness Index, (also presented in the LPR), which shows a decline since 1800, but has also flattened out in the last decade. Asia, Europe and Oceania are increasing their levels of intactness with the Americas and Africa still in decline.

The data on nature loss therefore gives us some hope – at the global level, the [Global Biodiversity Framework](#)'s ambition to halt and reverse biodiversity loss may just be within our grasp. The focus now needs to be on the areas where biodiversity is still being lost and on locations where growing populations can be further supported.

Nature is Dynamic

Nature is dynamic: all animals, plants, fungi, and microbes need to move. When they move it is to find food and homes; to breed, interact and cooperate; and to respond and adapt to disturbances (climate change being a case in point). For species to flourish they need to be able to move through a landscape or seascape, and for this there needs to be a degree of habitat intactness or at least a network of corridors. Having isolated protected habitats for biodiversity is not sufficient for flourishing.

This has led to increasing attention being paid to nature-corridors and nature-connectivity by the scientific community, with almost half a million published academic papers on the topic in the last decade alone. Indeed, the Global Biodiversity Framework refers to the need for well-connected

protected areas. In addition, while over 17% of land area is protected, [only half of this is 'protected and well connected'](#).

Businesses do not, in general, prioritise corridors and connectivity because it is not often the case that their operations align with a focus on such matters (linear infrastructure such as transport and energy networks would be an exception to this). In addition, the Taskforce on Nature Related Financial Disclosure (TNFD) does not mention corridors and the Science Based Targets initiative (SBTN) hardly mentions connectivity and corridors. Of the many commodity certification schemes only Round Table on Responsible Soya Association and Bonsucro (focusing on sugar) explicitly mention corridors.

In terms of reporting, both the GRI 101 (2024) and the CSRD standards include detailed requirements on corridors and connectivity. However, in our review of over 100 corporate reports on nature and biodiversity, we identified only half a dozen companies that have an approach on corridors that can be considered intentional and strategic.

Dependency on Nature

The [WEF report: Nature Risk Rising](#) states that “\$44 trillion of economic value generation – more than half of the world’s total GDP – is moderately or highly dependent on nature and its services and is therefore exposed to nature loss”. This statement is extensively quoted, but has led to a fundamental mistake of conflating dependency and risk. This is problematic, as these are two separate issues and dependency does not immediately or always lead to risk.

As IPBES has identified in its [Business and Biodiversity report](#), and as [our previous work](#) has uncovered, dependency is not well understood by companies. To take an example: the agriculture sector is generally classified as [highly dependent on nature](#). Yet an industrialised agriculture system asks little of nature beyond, perhaps, soil structure for the roots to support the plants. Everything else is controlled by using chemical inputs and irrigation. The dependency (and the risks) of this mode of farming is on fossil fuels. Compare that with crops grown under an organic agriculture regime. A farmer sowing seeds into the soil in this system is entrusting nature to take over and deliver the crop. The farmer’s role is to work with nature to help it to do its thing.

Dependency is a better starting point for interrogating resilience than risk. For example, climate change impacts the services that nature can supply. Soils need to retain more water, and bird and insect populations need to survive extreme weather. The role of the farmer working with nature, is very different to the farmer in an industrial agriculture setting where the reliance is on external chemical inputs or irrigation systems.

Dependency on nature goes hand in hand with the status of nature, and it evolves over time and as nature evolves. Without an understanding of the status of nature, and how this is changing over time, it is hard to assess resilience. This is where nature connectivity fits in, allowing species to move to find a new balance and thrive.

Resilience and risk of course go together. In the organic agriculture case, the risk comes from the ability of nature to find its new balance. But that can be due to an underinvestment by the farmer in activities to build resilience as well as in the capacity of nature to provide those services.

Nature as a Financial Risk

According to TNFD, in its [Evidence Review on the Financial Effects of Nature-related risks](#), "the evidence of financial effects of nature-related risks for businesses and the economy is extensive. However, company-specific evidence is limited in the academic literature."

It goes on to say that "the strongest evidence of material financial effects covers: ...water scarcity... liability risk (litigation and fines resulting from pollution and environmental degradation); ...reputational risk (deforestation, pollution and environmental degradation) ... and Policy (transition) risk".

Finally, the MSCI/WWF report, [Nature Related Risks](#), categorised nature risks as, primarily, reputational risks around 'damage' to nature, and physical risks due to climate change and water.

What starts to emerge from a closer examination of 'nature as a financial risk' is that after close to a decade of focus on nature and biodiversity we are no nearer to actually being able (or willing) to specify any material risk at the corporate level associated with nature and biodiversity, aside from the reputational risk associated with destroying it. Rather, we end up with a repackaging of long-standing environmental topics (water, waste, factory emissions), as evidence of companies' contribution to delivering upon their nature ambitions. This is very different to thinking of nature in terms of being essential for company operations or generating a direct financial risk.

Reporting is adding to the confusion in this area. Companies often report upon their proximity to areas of important biodiversity, though that proximity may lead to either an operational risk or a dependency. A factory or farm upstream of a Ramsar site certainly provides a risk to that site. A factory or farm downstream of a Ramsar site does not, but it may have a dependency upon it (for clean water). Proximity, therefore, only tells part of the story.

What Next for Business?

Taking the provocations to heart, we suggest how they affect what business, shareholders and central banks should do next.

Stop the Hyperventilation

Statements such as 'accelerating / catastrophic biodiversity loss' and 'nature related risks'; are no longer helpful. We need a clear focussed analysis and actionable insights of the state of nature in specific places, not slogans and hyperventilation.

The 2026 version of the Living Planet Report – at the time of writing, yet to be published - is an excellent opportunity to do a deep dive into the reasons why populations are increasing, stable or declining. We need to understand how no-deforestation policies, certification schemes and water governance contribute to these dynamics. This suggests that the Report should keep the 1970 baseline (to remind us where we have come from), but also instigate a 2015 baseline so we know where we are going. The latter focus might better guide corporate action where it is really needed.

Concentrate on a few Corporate Sectors

Rather than a broad-brush response requiring all corporate sectors to focus on TNFD reporting and biodiversity strategies, we need to: double down on the sectors that are associated with the

key drivers of biodiversity loss; those that limit the functioning of nature; and those operating in those places where nature continues to be destroyed.

This would entail firstly a deeper scrutiny on agriculture, food and fisheries: these sectors have made significant strides to halt deforestation and conversion of land, and to reduce fisheries pressures; but there is a lot more to do. Other sectors that create barriers to the free movement of species also need to be a priority. This includes lineal infrastructure (roads, rail, pipelines etc) and shipping routes, as well as any sector that owns or influences outcomes on land at a large scale such as forest companies.

Embrace Complexity

Nature and biodiversity are complex, and attempting to simplify it through global targets and global level reporting is not the right approach. Tackling complexity requires a mindset that accepts that complexity and treats every value chain on its own merits, and every landscape according to its own situation. Corporate reporting should demonstrate a consistent global approach, but the detail needs to be bottom up: providing an understanding of the status and functioning of nature at landscape levels across value chains (see below).

Uptake by companies on the development of nature scenarios has been slow compared to the development of climate scenarios. This is understandable, but developing nature scenarios is vital in forcing a deeper understanding of dependencies, resilience and actual risks. The Pentland Centre's work has [compiled examples of best practice on corporate scenario development](#).

Value Chains and Landscapes

Context is everything in nature: we need to design an approach to work with nature that avoids global generalities and rather focusses on the local context. This will require work on two levels – individual value chains and the landscapes that they are embedded within. As an example, utilities companies need to manage the biodiversity under their powerlines, and work with neighbours to ensure those same powerlines facilitate connectivity across the landscape. Nature dependencies also require a shared approach to responsibility. There is much to learn from the well-established approaches to water stewardship. Progress comes not just from individual actions in value chains, but from collaborative and collective action in landscapes and seascapes. Reporting needs to reflect and build upon this.

Invest in Corridors

It is time to move beyond key/important biodiversity areas as the only solution to nature conservation and restoration. Corridors are not just a must for nature, they also bring operational benefits for companies in the agriculture, forestry and infrastructure sectors. They can help build anticipatory resilience through reducing the impacts of extreme weather events and by moderating microclimates, stream flow, and providing effective firebreaks and pollinator habitats. They can also provide a tangible way to engage with communities and governments, and unlock co-finance. They are a science-based way to meet corporate commitments on nature-positive or regenerative agriculture, and provide practical evidence and data points to help reporting.

Disclosure and Action

After all the recent developments on voluntary reporting guidelines and new legislation, it is not the moment to propose a whole new approach to reporting on nature. But it is the time for

Governments, asset owners, academics and specialist NGOs to recognise the limitations of proxy indicators, and ask more probing questions of companies. Questions such as:

- What is the status of nature (degrading, stable, recovering) and governance of the priority ecosystems that a company is operating in/sourcing from?
- What proportion of landscapes that companies manage/are sourcing from have partnerships and collaborative strategies in place to create and maintain nature resilience and nature corridors?
- How much of future sales growth will be accommodated through: a) crop productivity growth, b) rehabilitation of degraded, underutilized/unused land, c) land clearing?
- What would be the consequences of the loss of (natural) pollination services?
- What would be the consequences of being able to rely upon effective natural pest control?
- What proportion of sourcing comes from 'healthy soil' (with measured data on water absorption/retention, microbial activity, soil organisms, carbon content)?
- What does proximity of operations to sensitive biodiversity areas mean in practice (in terms of status of the area, dependency and/or operational risk)?

This paper has argued that the next phase of corporate approaches to nature and biodiversity (both actions and reporting upon those actions), needs to move on from today's focus on global generalities, nature as a static entity, and abstract risk modelling of potential impacts and dependencies. It needs to recognise the landscape level contexts, facilitate the dynamism of nature, and focus on actual dependencies, impacts and risks.

The Pentland Centre continues to investigate this area of work. For more information, please contact:

Professor Jan Bebbington, Director of the Pentland Centre for Sustainability in Business,
j.bebbington1@lancaster.ac.uk

Duncan Pollard, Honorary Professorial Fellow, the Pentland Centre for Sustainability in Business,
duncan@dpollardassociates.eco

