Our debt to nature

Nature – and our reliance on everything it provides – is under threat as never before, with one million species at risk of extinction. Losses on this scale will have a devasting impact on human populations and the global economy. Sonya Likhtman outlines the value of biodiversity, the business case for its protection, and how we expect companies to respond.

Setting the scene

This year's plans for governments to agree a post-2020 global framework to protect biodiversity were swept aside by the pandemic, with discussions postponed until 2021. But while Covid-19 detracted from the biodiversity agenda in some ways, it brought our troubling relationship with other species to the fore. The wildlife trade and the destruction of habitats for agriculture, construction and other activities bring animals into closer contact with humans. This increases the risk of emerging infectious diseases, like Covid-19, moving from animal species to human populations, as our recent EOS Insights series on pandemics has highlighted.[1]

EOS has engaged with companies on eliminating deforestation, ensuring sustainable water use, and other topics related to biodiversity and sustainable land use for many years. We are members of the PRI-Ceres Investor Initiative for Sustainable Forests and the PRI Investor Working Group on Sustainable Palm Oil, amongst others. Our engagement with companies on climate change, sustainable food systems and the circular economy touches closely on the need to stay within planetary boundaries.

Respected natural historian Sir David Attenborough issued a stark wake-up call in September in his BBC documentary *Extinction: The Facts*. Explaining how everything in the natural world is connected in networks that support life on earth, he outlined why the destruction of natural habitats ultimately threatens our food and water security.

Our economies and societies are deeply embedded in nature, rather than existing alongside it. Recent estimates suggest that over half of global GDP is moderately or highly dependent on nature.[2] This may be due to dependence on raw materials, such as food ingredients, wood and medical

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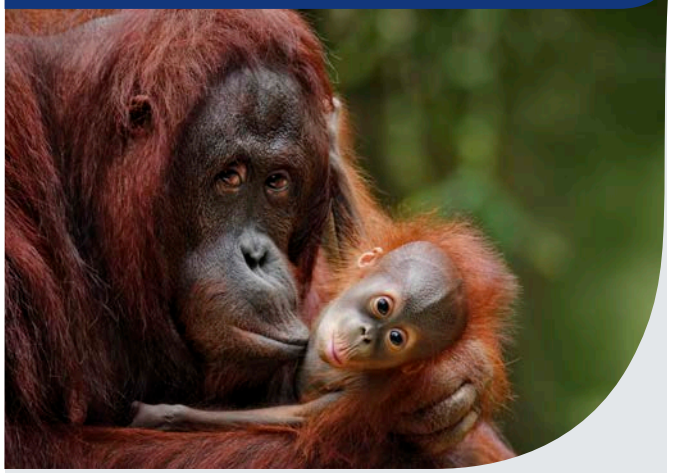
[1] https://www.hermes-investment.com/ukw/eos-insight/coronavirus/the-coronavirus-and-our-relationship-with-nature/
[2] http://www3.weforum.org/docs/WEF_New_Nature_Economy_Report_2020.pdf

components, or on a range of processes enabled by nature. These ecosystem "services" include the provision of clean air, the maintenance of the water cycle, climate regulation, pollination and the availability of nutrient-rich soils. Healthy levels of biodiversity, including among plants, animals and micro-organisms, enable ecosystem services to function effectively.

Defining biodiversity



- Biodiversity has been defined 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."[3]
- US$44 trillion of economic value generation is highly or moderately dependent on nature and the services that it enables.[2]
- Nature-positive solutions can create 395 million jobs by 2030 and US$10.1 trillion in business opportunities.[6]

For the most part, companies have taken the immense value of nature for granted, despite relying heavily on the public goods that it enables. However, it is now evident that global ecosystems are threatened at unprecedented levels. A landmark study on the global state of biodiversity found that one million species are at risk of extinction and that the rate of extinction is increasing.[4] Human activity has severely altered 75% of terrestrial environments and the Living Planet Index shows an average 68% decrease in mammal, bird, amphibian, reptile and fish population sizes between 1970 and 2016.[5]

The five main drivers of biodiversity loss are changes in land use and sea use, direct exploitation of organisms, climate change, pollution and invasive alien species.[4] The World Economic Forum reports that three systems are responsible for endangering 80% of threatened or near-threatened species. These systems are food, land and ocean use; infrastructure and the built environment; and energy and extractives.[6] Transformations across these systems and the companies that operate within them are urgently required to halt and reverse biodiversity loss.

The business case for protecting biodiversity

Supply capacity

Some sectors are almost completely dependent on ecosystem services and intact biodiversity throughout their supply chains. Companies are increasingly likely to face challenges in sourcing raw materials due to disruptions to ecosystem services. Food and beverage companies, for instance, will feel the effects of the decline of pollinators due to pesticide use, climate change, and habitat loss.[7] The degradation of topsoil, which contains most of the soil's organic matter and biological activity, will limit agricultural yields unless regenerative practices are adopted. Large-scale crop failures could lead to sudden price shocks, prolonged shortages, rationing or devastating regional famines.

Consumer

Millennials and younger generations are increasingly indicating their preference for greater sustainability and transparency. This is apparent in the level of support for campaign groups such as Extinction Rebellion, and activists such as Greta Thunberg. As the risk and impact of biodiversity loss gains greater public attention, it will become another lens through which consumers can assess and develop preferences around companies and products. Companies that are found to be responsible for deforestation, oil spills in precious ecosystems, or any other form of biodiversity decline can expect to face significant reputational risks.

Market

Companies that do not pivot to a nature-positive economy are likely to face a series of transition risks. To make their business models resilient, companies should be proactive and innovative in developing nature-positive operations, products and supply chains. This will also enable companies to contribute directly to the UN Sustainable Development Goals (SDGs). Two SDGs - Life Below Water and Life on Land - are explicitly linked to biodiversity, while many more, including those relating to poverty, gender equality, health and climate action, are indirectly dependent on intact biodiversity and ecosystem services.

Engagement on bee welfare

Chemical-intensive agricultural practices and the application of pesticides are considered among the drivers of pollinator decline. We engage with companies that produce neonicotinoids and other pesticides on their approach to product risk management. For instance, we have been engaging on product stewardship and transparent reporting with Bayer since 2011.

We have also hosted a Roundtable on Bee Welfare, which was attended by academics, representatives from NGOs, including the European Professional Beekeepers Association, and industry players such as Bayer, BASF and Syngenta. We will continue to engage with companies in the agrochemical industry with the goal of reversing the decline of pollinators, as outlined by the EU 2030 biodiversity strategy.

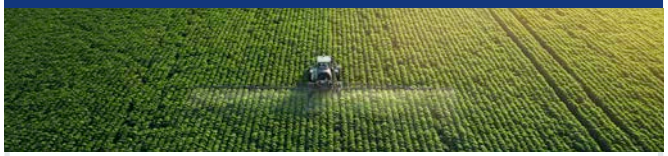
[3] https://www.cbd.int/convention/articles/?a=cbd-02
[4] https://ipbes.net/global-assessment
[5] https://www.zsl.org/sites/default/files/LPR%202020%20Full%20report.pdf
[6] http://www3.weforum.org/docs/WEF_The_Future_Of_Nature_And_Business_2020.pdf
[7] https://ec.europa.eu/environment/integration/research/newsalert/pdf/issue-23-2020-05-pollinators-future-brief_en.pdf

Policy and legal

Countries are expected to agree on global goals for biodiversity in 2021 and, like the Paris Agreement for climate change, the targets will be delivered by countries and companies. By 2030, the EU biodiversity strategy[8] seeks to protect at least 30% of land and seas, increase organic agriculture to 25% of the EU total, and halve the use of the most hazardous pesticides. The litigation risks that arise when companies negatively impact biodiversity are already apparent; the Deepwater Horizon oil spill in 2010 released 130 million gallons of crude oil into the highly biodiverse Gulf of Mexico, with the clean-up and litigation costs amounting to US$65 billion.[9] Costs for companies are likely to increase further as the protection of biodiversity becomes a public policy priority.

CASE STUDY

The global beverage company



We have been engaging with this beverage company on its water stewardship strategy for many years. This year we expanded the conversation to biodiversity and regenerative agriculture.

We spoke to the sustainability director about how these topics would be included in the 2030 sustainability strategy and were pleased to hear that biodiversity and regenerative agriculture will be greater focus areas for the company over the next 10 years. We encouraged it to develop its reporting to give greater transparency of the inputs, such as fertiliser use, and the outcomes of its actions, such as soil quality, so we can understand its progress and impact. We also urged it to demonstrate how its approach to biodiversity aligns with the upcoming UN 2050 goals for biodiversity and the supporting 2030 action targets.

Amy Wilson
Sector lead: Retail

Engagement expectations

Companies need to urgently acknowledge their impact and dependence on nature. This means understanding the ways in which biodiversity and ecosystem services are relevant to the business model, be this through sourcing practices and supply chains, in the construction of new sites, or through the ways the company's operations interact with surrounding ecosystems. The sectors that we have identified as key to halting and reversing biodiversity loss are consumer goods and retail, agrochemicals, mining and materials, oil and gas, utilities, finance and real estate.

Target

We expect companies to address the risks associated with high dependence and commit to having no further negative impact on biodiversity. Given the extent of biodiversity loss, conserving existing biodiversity will not be enough; it will also be necessary to restore biodiversity and the capacity of ecosystems. Therefore, we expect companies to implement measures that will have an overall net positive impact on biodiversity, including throughout their supply chains. While the commitment may be at the organisational level, much of the work required to ensure a net positive impact on biodiversity will be conducted at a local level.

Measurement

A key step for many companies is to measure their impact and dependence on biodiversity and ecosystem services. This is a complex but worthwhile task, as understanding their relationship with nature will enable companies to build nature-positive products, operations and supply chains. While there is no single perfect metric or framework, a range of helpful measurement tools and reporting frameworks are emerging. For instance, an initial guidance document on Science-Based Targets for Nature was recently published.[10]

Strategy

Once a company has identified its material dependencies and impacts on biodiversity and ecosystem services, it will be able to design impactful interventions. The strategy may target particular geographical areas, commodities and processes. Eliminating deforestation from supply chains and supporting the transition to regenerative agriculture will be critical (see boxes). The strategy may also include nature-focused innovation and new product development. For many companies, improving supply chain oversight and engagement will be a key aspect of the biodiversity strategy, as that is where many of the impacts and dependencies will be concentrated.

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Governance

We expect companies to implement strong governance frameworks to support their net-positive aspiration. Through voting and other forms of stewardship, board directors will be increasingly held accountable for mitigating their organisation's negative impacts on biodiversity and ensuring sustainable land-use throughout the supply chain, including eliminating deforestation. This includes advocating for the protection of nature through public policy. Biodiversity risks and opportunities should be deeply integrated into all relevant processes, including risk management, business strategy, supply chain management, procurement, research and development, and operations.

[8] https://ec.europa.eu/environment/nature/biodiversity/strategy/index_en.htm
[9] https://www.theguardian.com/business/2018/jan/16/bps-deepwater-horizon-bill-tops-65bn
[10] https://sciencebasedtargetsnetwork.org/wp-content/uploads/2020/09/SBTN-initial-guidance-for-business.pdf

Deforestation

Halting and reversing tropical deforestation will be essential for avoiding the consequences of severe climate change and biodiversity loss. According to the Intergovernmental Panel on Climate Change (IPCC), 23% of global anthropogenic greenhouse gas emissions are from agriculture, forestry and other land use, with 11% of this coming from global deforestation and land conversion.[11] Tropical rainforests are home to approximately half of the world's plant and animal species, play an important role in regulating rainfall, and act as carbon sinks.

Deforestation and forest degradation, mostly driven by beef, palm oil, soy and other agricultural commodity production, has continued despite the immense value of tropical rainforests. Alarmingly, the rate of deforestation has increased in Asia, Africa and Latin America during the coronavirus pandemic.[12] We are working as part of the Investors Policy Dialogue on Deforestation in Brazil to reverse this trend in the Amazon rainforest. We also recently responded to the UK government's consultation on legislative proposals to tackle illegal deforestation in supply chains.

Companies that source commodities that may be linked to deforestation must urgently commit to clear timelines for eliminating deforestation from their supply chains. The commitment should cover all commodities, regions and suppliers, including indirect suppliers.[13] We expect companies to communicate a clear strategy for how a deforestation-free supply chain will be achieved through implementation measures, monitoring, independent verification and collaboration. Companies that can achieve traceability of commodities back to source will be best placed to achieve a deforestation-free supply chain.

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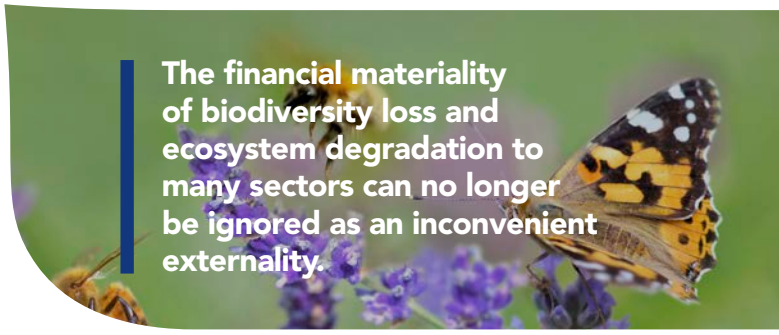
Regenerative agriculture

Approximately half of the world's habitable land is now used for agriculture, with 77% of that proportion used for animal grazing or growing crops for animal feed.[14] Industrialised farming requires high chemical inputs, promotes mono-cropping and destroys the soil's natural ability for carbon sequestration. Regenerative agriculture, on the other hand, seeks to restore the soil's natural ability to absorb and retain carbon, improves biodiversity and enhances ecosystem services.

Companies with agricultural supply chains should actively encourage and support farmers in transitioning to regenerative agriculture. By setting targets to source ingredients from regenerative agriculture and working with farmers on implementation, companies can contribute to a system-wide change in how food is produced. The transition will play a critical role in mitigating climate change and restoring biodiversity.



Looking ahead

Global biodiversity targets for 2030 and 2050 will be agreed in 2021 and companies must be ready to deliver them. The financial materiality of biodiversity loss and ecosystem degradation to many sectors is apparent and can no longer be ignored as an inconvenient externality. There are also serious risks to the financial system and the global economy. Stewardship on these issues is a key means by which investors can ensure that companies recognise the importance of biodiversity and then take meaningful and concrete steps to protect it.

[11] https://www.ipcc.ch/srccl/
[12] https://www.ft.com/content/b72e3969-522c-4e83-b431-c0b498754b2d
[13] https://www.ceres.org/resources/reports/investor-guide-deforestation-and-climate-change
[14] https://ourworldindata.org/global-land-for-agriculture

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