

Why biodiversity matters

Rebecca White highlights the importance of biodiversity

Biodiversity is vital to sustaining human life – it is thought that biodiverse lands are more effective carbon sinks, and also provide better natural protections from physical climate risks. The invisible, natural services, such as pollination and carbon sequestration, enabled by biodiversity are worth an estimated \$125-140 trillion per year – more than one and a half times the size of global GDP.¹

Despite human existence depending on natural capital and biodiversity, it is in rapid decline, and it seems reasonable to assume that this will continue, unless there is decisive action. In 1937, the global population was 2.3 billion, carbon in the atmosphere was 280 parts per million (ppm), and two thirds of global wilderness was untouched. Fast forward to 2020, and the global population had swelled to 7.8 billion, atmospheric carbon had almost doubled to 415 ppm, and just over one third of the wilderness remained.

Compared to environmental issues such as climate change, where greenhouse-gas emissions can be measured and tracked, biodiversity can feel intangible and is far more complex and challenging to quantify. Businesses seldom measure their impact on, or reliance upon, biodiversity.

There are five drivers of biodiversity loss on land: land-use change, land exploitation, climate change, pollution, and alien species. Of course, ocean biodiversity is also at risk, but there is generally less understanding of this given that only around 5 per cent of our ocean has even been explored.

We have seen a mass-scale conversion of wildlife habitats to agricultural

use, resulting in rapid deforestation. According to J.P. Morgan's deforestation toolkit,² agricultural expansion represents 73 per cent of deforestation worldwide. Commodities, including palm oil and soy, are under scrutiny, as is land clearing for cattle raising. To put this into context, palm oil, soy and cattle ranching were estimated to account for 40 per cent of deforestation between 2000 and 2010, versus 10 per cent owing to urban expansion.

As the planet's population expands, and demand for calories, protein and consumer products increases, demand for commodities and land to produce them on is likely to increase. Cotton production, for example, has a substantial negative impact on biodiversity. While it requires only 2.4 per cent of the world's arable land, cotton is the most water-intensive crop and accounts for 24 per cent of global demand for insecticides.³

While the strains on biodiversity are widely understood, the investment implications are less clear, although they have the potential for material ramifications across sectors and geographies.

First, there are physical risks. Biodiversity loss is linked to deforestation, which exacerbates climate change by reducing the planet's carbon sequestration abilities, as well as its ability to provide humans with protection against extreme weather events. It is also interconnected with soil degradation, which negatively affects agricultural yields and therefore our ability to efficiently produce foods. The Food and Agriculture Organization of the United Nations notes that pollinators affect 35

per cent of global land use for agriculture, which covers the production of 87 per cent of leading global food crops.⁴

In May 2020, the European Union adopted a Biodiversity Strategy for 2030, which aims to protect nature and restore ecosystems. This will increase the number of protected sites, include binding nature restoration targets, and create funding to improve understanding of biodiversity, to monitor impacts, and ensure these are integrated into business and investment decision-making.⁵ So there are clearly transition risks as regulation and international coordinated efforts to promote biodiversity increase.

Finally, there are systemic risks owing to human reliance on biodiversity. For example, 50,000-70,000 plant species are harvested for traditional or modern medicine, comprising key raw materials in professional medicines and consumer products.

In early 2021, we identified biodiversity as an engagement policy objective because, as investors, we have a duty to understand a company's impact on biodiversity. Given limited corporate disclosures on this subject, we believe engagement with investee companies is likely to play a central role. This can encourage a greater understanding of biodiversity as an investment risk, as well as the collection of data to inform business decision-making, alongside the monitoring of progress.



Written by Newton responsible investment analyst, Rebecca White

In association with



¹ OECD (2019), Biodiversity: Finance and the Economic and Business Case for Action, report prepared for the G7 Environment Ministers' Meeting, 5-6 May 2019.

² Grow, Forest, Grow, J.P.Morgan Cazenove, 22 January 2021

³ Living Waters - Conserving the source of life, World Wildlife Fund, January 15, 2003

⁴ Why bees matter: The importance of bees and other pollinators for food and agriculture, Food and Agriculture Organization of the United Nations, 20 May 2018

⁵ Biodiversity strategy for 2030, European Commission

Pushing back on plastic

Ed Geall explores the increased focus on plastic pollution

Plastics and packaging have become a poster child for environmental pollution and neglect over the past few years, which has led to a consumer backlash against plastic and packaging excess. This, in turn, has led to consumer goods companies redoubling their efforts to find ways to ensure that plastics can be recycled, reused, or composted.

In the UK alone, packaging accounts for around 30 per cent of plastic demand, and plastic packaging makes up around 70 per cent of all plastic waste. Plastic's durable nature results in the production of microplastics, which often build up in waterways, and subsequently enter the food chain, harming local ecosystems and biodiversity. The stark scale of the problem is highlighted by the fact that an estimated 80 per cent of all marine debris is made up of plastic waste.

Growing regulation

Other than the obvious damaging environmental consequences, companies that rely heavily on plastic remain exposed to reputational risk, reduced consumer engagement with their products, and the threat of regulatory fines.

The European Union's Circular Economy Plan has created specific proposals to tackle plastics and packaging, which focus on reducing waste, improving recyclability, and addressing the issue of microplastics. Moreover, regulation is increasingly coming into play, with

extended producer responsibility laws being introduced, thus creating liability for producers over the use of plastic items and encouraging an increase in recycled content.

Bioplastic resurgence

There is growing evidence that consumers are willing to pay a premium for bioplastics, as biodegradability is seen as one important way to reduce plastic waste. Bioplastics can be broken down into two types: the first is produced from agricultural feedstock as opposed to oil, while the second type is designed to be biodegradable after use. The former, known as bio-based plastics, may help to reduce life-cycle carbon emissions, while the latter, biodegradable plastic, can address the ever-growing issue of plastic waste.

There is no one solution to addressing the extent of plastic and packaging waste, nor to reaching net-zero carbon emissions. As such, we look at a range of potential solutions to reducing plastic and packaging waste for investment opportunities:

- **Recycling:** Some 32 per cent of globally produced plastics escape collection, while only 14 per cent of plastic packaging is recycled for future use. It is important to note that there is no 'silver bullet' here, as at least 38 per cent of plastic must be made from new rather than recirculated feedstock.

- **Paper:** Paper is suitable for replacing

plastic across several key items: film and wraps; rigid plastic packaging; sachets and multilayer film; pots, tubs and trays; and disposable food containers.

- **Bio-based plastics:** Around 6 per cent of fossil-fuel demand is for plastic production, and on current estimates, that is set to grow to 20 per cent by 2050. The growth of bioplastics offers a potential alternative and may also offer lower life-cycle carbon emissions over time.

- **Biodegradable plastics:** These are a suitable solution for food packaging, so that leftovers and packaging can be composted together. In 2019, 59 per cent of biodegradable plastic demand was for packaging.

As investors, we are mindful that there are technical challenges associated with plastic recycling, and that there are limits to how many times plastic can be recycled. Despite a multitude of commitments and pledges, relatively few companies have yet disclosed how much they will invest in packaging innovation and the shift from virgin to recycled plastic. Many biodegradable plastics also require industrial composting, which can create challenges around collection, but we are hopeful that the increased consumer focus on this area, combined with technological innovation and helpful regulation, will ultimately help to reduce the impact of plastic and packaging pollution on our planet.



Written by Newton global thematic analyst, Ed Geall

In association with



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