

ESG Strategy Series

What is driving the Biodiversity Emergency?

It is becoming increasingly apparent that biodiversity and climate change are intrinsically linked, and that both need to be resolved together – it is a twin emergency. Strong compelling reasons why organisations should also be considering their risk exposure to biodiversity loss are also becoming increasingly clear whilst society and the wider investor community are now also starting to request this type of ESG disclosure.

This is our first biodiversity focused article in our ESG strategy series, where we are looking to set the scene and explore what biodiversity is and why it is becoming an emergency. In future articles we will be looking to expand on what is driving action/ focus on the biodiversity crisis as well as what the risk and opportunities are for organisations and what is currently considered best practice when looking to measure and manage it. We will also be exploring topics such as whether we can actually put a value on it.

What does biodiversity mean?

Most readers will be familiar with decades-old campaigns to save species from extinction, and often the more prominent and charismatic ones, such as the giant panda and the Siberian tiger. However, those species are rarely key to healthy, functioning ecosystems; rather this depends on the less well known and often poorly understood insect, plant and microbial communities and the various processes that shape them.

Biodiversity can be defined as the biological variety and variability of life on our planet. It includes differences between individuals, the range of species within ecosystems, and the range of ecosystems within landscapes or biomes. In practical terms, we usually think of biodiversity as being about species – the number of species associated with certain ecosystems, or which are present within a geographically defined area, such as a country.

What is happening to biodiversity?

Species and habitat are rapidly declining for a range of reasons. These include both obvious ones, such as the removal of virgin forests or elephants being killed for their tusks, and the less obvious ones, such as rare plants being outcompeted by species that benefit more strongly from fertilisers and the lack of disturbance from trampling and grazing by large mammals. Some effects can take years to become apparent, which complicates the assessment of causes and effects. In recent years, the biodiversity crisis has grown into an actual emergency: It is estimated that over one million species are currently at risk of extinction owing to human activity, with species disappearing at between 50 and 100 times the natural rate, and we have to accept that traditional conservation measures are often failing.

Should we care?

After all, the vast majority of the species at risk may be neither prominent nor have a measurable function within their ecosystems. Some conservationists take the stance that we should protect species and ecosystems for their own sake, and they view with scepticism arguments about the benefits of biodiversity to human society, because it could mean that a species of no apparent value to us doesn't deserve protection. However, species exist in complex networks with other species, and the function or effect of ecosystems is higher than the sum total of the constituent species. The more diverse the systems, the more resilient and stable they tend to be. For example, a plantation woodland can help absorb and slow down the release of rainwater, thereby reducing the risk of flooding, but it won't be as effective as a species-rich woodland, and it will also be more vulnerable to diseases. So, yes, we should care!



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What are the benefits of biodiversity?

Biodiversity brings too many benefits to list here, but a topical example is the climate crisis: Active peatlands sequester (bind) atmospheric carbon and store it as peat, which builds up because the waterlogged conditions prevent decomposition. But many peatlands have been drained, e.g. to improve the land for grazing livestock or for timber production and, instead of being sinks, they are sources of carbon as the dry peat decomposes. Restoring the hydrology of drained peatlands before the peat is gone can help bring back active peatland – and with it, its important function as a carbon sink.

Diverse ecosystems and landscapes also increase resilience to extreme weather, one of the effects of climate change. Woodlands moderate temperatures, and planting urban woodlands is one of the tools now being implemented to cool cities prone to extreme heat events (e.g. over 50°C). Woodland is also being planted in Sub-Saharan Africa, which has been struggling with land degradation for decades owing largely to human pressures, but the [Great Green Wall of the Sahara](#) and the Sahel project is trying repair some of the damage: This African Union-led project was initially conceived as a way to combat desertification by planting a wall of trees stretching across the entire Sahel but has since evolved into a programme to promote water harvesting techniques and greenery protection and improving indigenous land use techniques, aimed at creating a mosaic of green and productive landscapes across North Africa. A decade in, the scheme is roughly 15% underway and already bringing life (both nature and human related) back to Africa's degraded landscapes at an unprecedented scale. It's not restoration towards some pre-human biodiversity target but rather is a demonstration that by managing biodiversity, land productivity and diversity can be enhanced.

The biodiversity emergency

The biodiversity emergency is caused by humans and is coming to a head. But it will also only be through human ingenuity and willingness to change the situation that the damage can be repaired, and functional, suitable ecosystems can re-emerge. We need to think big here; in general biodiversity levels don't survive being restricted to small, isolated islands, which is how many existing nature reserves can be regarded; some species cope but others decline and finally disappear, and they cannot subsequently cross the sea of agriculture and other human land uses to re-colonise the reserve. We need to implement biodiversity projects at the landscape scale to restore sustainable, resilient systems.

How we can help?

The biodiversity crisis creates both risks and opportunities for organisations both now and in the future. However, the knowledge and information needed to fully understand what the [financial risks](#) from nature loss is not yet known by most organisations. Our designated ESG team, backed by technical specialists in biodiversity and [nature-based solutions](#), can help organisations map out both their risks and opportunities to nature loss and gain and incorporate these into business strategy and risk management frameworks whilst also complementing and building on wider ESG messaging and strategies.

