



# The Importance of Biodiversity

NorthPeak  
Advisory 

## The Importance of Biodiversity

Biodiversity, the variety of life on Earth in all its forms, plays an indispensable role in the stability and resilience of ecosystems. It supports essential ecosystem services such as water purification, air quality maintenance, crop pollination, and nutrient cycling; which themselves underpin entire industries, particularly agriculture, forestry, fisheries, and tourism.

Biodiversity is increasingly recognised as critically important, garnering significant focus and attention to the extent that it is now being referred to as "**the next carbon.**" The crisis of climate change cannot be separated from biodiversity, as the interplay between biodiversity and climate change is profound and multidirectional. Climate change exacerbates biodiversity loss through altering habitats, changing the geographic ranges of species, and increasing the frequency of extreme weather events, such as fires and storms, all of which disrupt our ecosystems. Conversely, biodiversity strengthens the resilience of ecosystems against the impacts of climate change, such as flood protection, whilst also enhancing our capacity to mitigate climate change through carbon sequestration.

The 2019 IPBES Global Assessment Report on Biodiversity and Ecosystem Services highlighted that an estimated one million animal and plant species are now threatened with extinction, more than ever before in human history. In 2023, the World Economic Forum called biodiversity "one of the fastest deteriorating global risks"<sup>1</sup>, just behind extreme weather events and critical change to earth systems. Preserving and restoring biodiversity is not just a philanthropic endeavour but also carries significant economic and societal benefits.

However, the challenges with biodiversity encompass scientific, technical, and policy realms, including the:

- (1) Lack of standardised methods for collecting and analysing biodiversity data, which leads to inconsistencies and difficulties in assessing trends and impacts;
- (2) Scarcity of comprehensive data, and;
- (3) Inherent complexity of ecosystems, characterised by intricate interactions within and between species and their environments.

## What is Biodiversity?

*"Biological diversity" (Biodiversity) is the variability among living organisms from all sources including inter alia, 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. (The Convention on Biological Diversity, 1992)*

It is the interaction of these living elements which result in the provision of ecosystem services, such as pollination and soil erosion – services upon which businesses and, more broadly, our economy have come to rely on.

## The Complexity of Biodiversity

Understanding biodiversity is more than just counting how many species there are in a particular ecosystem. Rather, biodiversity has "**deep uncertainty, [...] related to tipping points and regime shifts, complex transmission channels, and potentially far-reaching impacts.**"<sup>2</sup> Tipping points, defined as critical thresholds beyond which ecosystems may collapse or undergo drastic and often irreversible changes, are notoriously difficult to predict. However, we do know that the continued degradation of biodiversity will lead to unpredictable and potentially irreversible changes to our ecosystems, which will significantly impact our economy.

<sup>1</sup> <https://www.weforum.org/publications/global-risks-report-2023/>

<sup>2</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/962785/The\\_Economics\\_of\\_Biodiversity\\_The\\_Dasgupta\\_Review\\_Full\\_Report.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/962785/The_Economics_of_Biodiversity_The_Dasgupta_Review_Full_Report.pdf)

## Why is Biodiversity so Important?

### Economic Significance

Our economy is dependent on well-functioning ecosystem services:

- Swiss RE Group estimates that “**over half (55%) of global GDP, equal to USD 41.7 trillion, is dependent on high functioning biodiversity ecosystem services.**”<sup>3</sup>
- The World Economic Forum estimate that USD **44 trillion of GDP is “moderately or highly dependent on nature and its services.”**<sup>4</sup>
- A PWC analysis of 19 large stock exchanges found that **more than half the market value of listed companies is at risk due to their moderate and high dependence on nature**<sup>5</sup>.

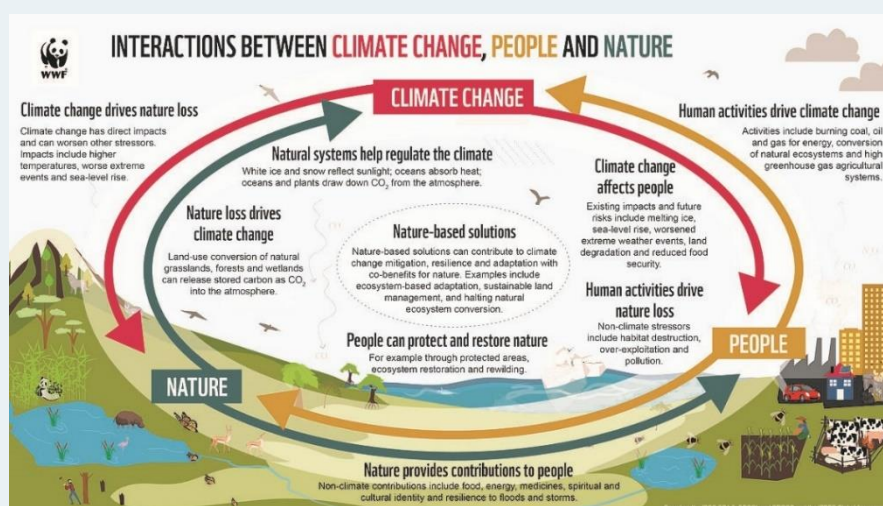
Even if a company is operating in an industry that is not directly dependent on biodiversity and ecosystems services, the company’s own impact on biodiversity can be a material risk. Following the 2010 Deepwater Horizon Oil Spill, BP has paid “more than US\$60 billion in criminal and civil penalties, natural resource damages, economic claims and cleanup costs.”<sup>6</sup>

**Biodiversity is significant to market participants that depend on it or influence it.** Investment managers and corporates that are identifying issues material to their business, whether from a financial perspective, impact perspective or a combination of both (double materiality),<sup>7</sup> can no longer ignore biodiversity.

### Climate Change

Biodiversity is also tied directly to climate change: **biodiversity and climate change have an interdependent and mutually reinforcing relationship**, whereby biodiversity is being negatively impacted by climate change and the negative impacts of climate change are worsened due to the decline of biodiversity (see below). The interconnected nature of biodiversity and climate change means that one cannot be adequately addressed without the other.

**Figure 1. Interactions Between Climate Change, People and Nature**



3 <https://www.swissre.com/media/press-release/nr-20200923-biodiversity-and-ecosystems-services.html>

4 <https://www.weforum.org/press/2020/01/half-of-world-s-gdp-moderately-or-highly-dependent-on-nature-says-new-report/>

4 <https://www.pwc.com/gx/en/strategy-and-business/content/sbpwc-2023-04-19-Managing-nature-risks-v2.pdf>

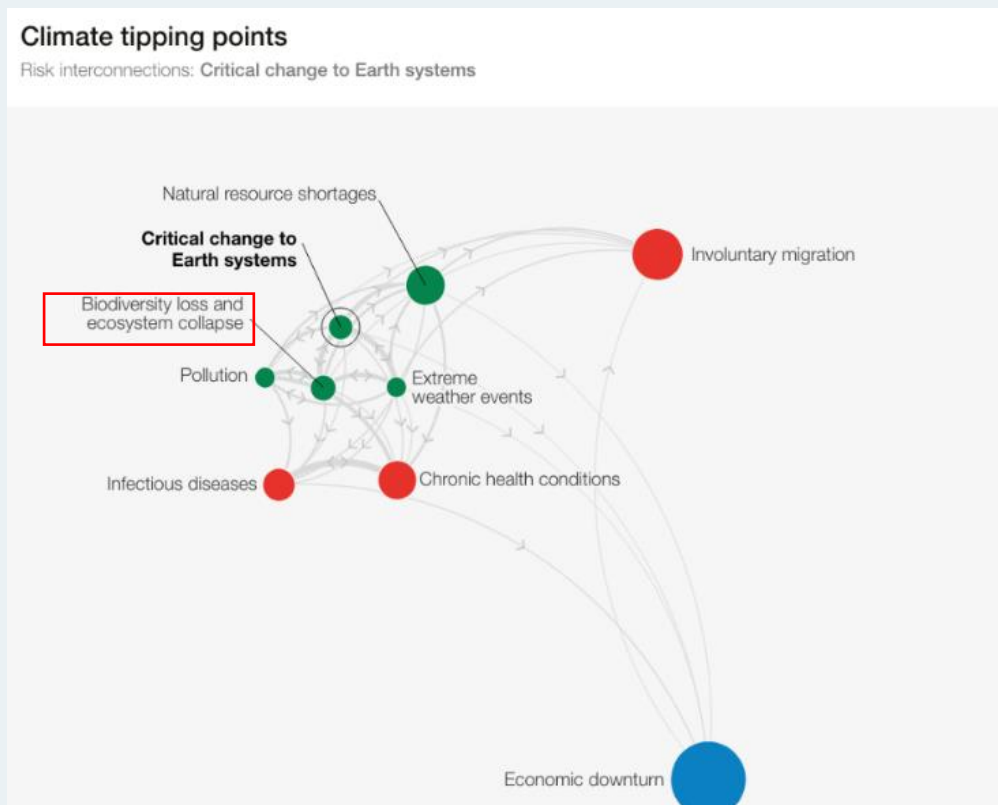
6 BP paid a steep price for the Gulf oil spill but for the US a decade later, it’s business as usual (theconversation.com)

7 “Double materiality” refers to both implications for the company’s financial value and the company’s outward impact on the world.

## Chronic Health, Infectious Diseases and Much More

Biodiversity also **sits at the nexus of other issues such as chronic health conditions, infectious diseases and natural resource shortages**. This has elevated biodiversity to a prominent political issue both for national governments as well as globally.

**Figure 2. World Economic Forum Climate Tipping Points**



## Global and Regulatory Attention

The Kunming-Montreal Global Biodiversity Framework (GBF) reflects the increasing global recognition of biodiversity's significance – and its rapid deterioration. The Framework comprises of **four goals and 23 targets, with the aim of preserving and restoring biodiversity loss by 2030**. Key targets for investors and corporates include:

1. Mobilise at least \$200 billion per year to implement biodiversity strategies and action plans by 2030.
2. Commit to identify by 2025, and eliminate by 2030, a total of at least \$500 billion per year of subsidies harmful to biodiversity and scale up positive incentives for the conservation and sustainable use of biodiversity.
3. Require large and transnational companies and financial institutions to monitor, assess, and transparently disclose their risks, dependencies and impacts on biodiversity through their operations, supply and value chains and portfolios.

Regulators have also implemented a myriad of sustainability-related regulations that address biodiversity, including:

- **CSRD** – An EU regulation that **mandates in scope companies (~50,000) to report on material sustainability topics**, one of which looks at the direct risks and opportunities linked to biodiversity, impacts on biodiversity, and measures taken to safeguard or restore biodiversity (ESRS 4).

- The release of **Taskforce on Nature-Related Financial Disclosures (“TNFD”)**, a reporting framework that supports investment managers and companies with assessing, reporting and acting on their nature-related dependencies, impacts, risks and opportunities. Although not a regulation in of itself, it is expected that regulators use the reporting framework for the basis of any of their own regulations around biodiversity-related disclosures, similar to how TCFD has been adopted by regulators.
- **EU Nature Restoration Law** – A law passed by the EU which aims to **restore ecosystems, habitats and species across the EU’s land and sea areas**. It aims to cover 20% of the EU’s land and sea areas by 2030, with the longer-term aim of restoring all ecosystems by 2050.
- **Biodiversity Net Gain** – A UK law which requires **real estate developers to deliver a 10% biodiversity net gain (BNG)** on projects, with the intention of leaving habitats for wildlife in a measurably better state prior to development.

## Conclusion

Investors and corporates can no longer afford to overlook biodiversity. Even though biodiversity risks, opportunities, and impacts often unfold over a longer time horizon, the scale and complexity of the challenge requires immediate action, and effective action will depend on reliable data.

Our next piece will explore the state of biodiversity-related data, highlighting how existing data fail to provide investors, corporates and society with decision-useful information necessary for addressing the biodiversity challenge.

## About NorthPeak Advisory

NorthPeak Advisory is a boutique Sustainability advisory firm supporting asset managers and corporates across all stages of sustainability integration. We partner with our clients to develop industry-leading, streamlined solutions that enhance the efficiency of sustainability efforts, turning data and environmental science into strategic business advantages.

The shifting ESG and sustainability landscape is unpredictable with new challenges are constantly arising. From industry leading double materiality assessments for CSRD, creating bespoke responsible investment strategies and developing a cutting-edge scientific framework for the highest standard in biodiversity measurement and tracking, we stay on the front edge of sustainable transformation and constantly innovate to incorporate the latest data-led approaches into the development of our solutions.

As a signatory to the UN-Supported Principles for Responsible Investment (“PRI”), NorthPeak Advisory is a supporter of “SPRING”, a PRI stewardship initiative for nature. We hope that our biodiversity solutions will support the institutional investors in using their influence to halt and reverse global biodiversity loss by 2030.

## Benjamin Stone, Associate

Benjamin works as part of the Advisory Team, playing a leading role within client engagements. His areas of focus include conducting investment strategy ESG and Responsible Investment assessments, creating bespoke ESG integration frameworks, leading ESG Training sessions, ensuring alignment with both regulatory and reporting requirements, such as EU SFDR, UN PRI, TCFD, and GRESB. Benjamin has a strong understanding of responsible investment, and his extensive experience allows him to build tailored solutions that are aligned with a client’s investment strategy and asset class.

Benjamin holds a first-class BSc in Politics and History from the London School of Economics and Political Science. He also holds the CFA Certificate in ESG Investing.