

# DEMYSTIFYING NATURAL CAPITAL AND BIODIVERSITY

Resetting our relationship with nature to preserve  
life, business and global economies.

Our economies, livelihoods and well-being all depend on our most precious asset: nature<sup>1</sup>. Nature’s contribution to the global economy is estimated to be USD\$125 trillion per year,<sup>2</sup> while over 50 percent of the world’s GDP (USD\$44 trillion) is moderately or highly dependent on nature and its services<sup>3</sup>. Unsurprisingly, the World Economic Forum’s 2021 Global Risks Report ranks biodiversity loss as the fourth top risk by impact, following infectious diseases, climate action failure and weapons of mass destruction.



Despite this, nature is often perceived to be ‘free of charge’ – meaning it is systemically undervalued, or unvalued, in all levels of society and decision making. We often take it for granted, consider it an externality, and are increasingly at risk of over-exploiting it.

The demands humans place on nature today are equivalent to the sustainable output of 1.6 earths<sup>4</sup>. Successive international scientific reports<sup>5</sup> present a clear, unified message: The global economy is rapidly approaching a ‘planetary tipping’ – the first of its kind induced by humans. It is a state of change so severe that we will be irreversibly pushed into a different way of living. This change will ripple through our globalised system and impact our economies and the ability of people, communities, and businesses to thrive.

At the corporate level, nature-related risks and opportunities are best understood through the lens of impacts and dependencies. These concepts are defined by the Organisation for Economic Co-operation and Development (OECD) as follows<sup>6</sup>:

- **Impacts:** How an organisation’s activities positively or negatively impact nature from the ‘inside-out’. For example, chemical pollution (as a negative), reforestation and afforestation (as a positive).
- **Dependencies:** How nature positively or negatively impacts on an organisation’s immediate financial performance from the ‘outside-in’. For example, extreme heat (as a negative), soil fertility (as a positive).

## What is nature-positive?

Nature-positive means enhancing the resilience of our planet and societies to halt and reverse nature loss. It has become a movement, with leaders from governments, businesses and civil society committing to action. The G7 2030 Nature Compact signed by G7 leaders recognised the nature-positive movement, calling for an urgent system-wide change. It pledged that “our world must not only become net zero, but also nature positive.” A nature-positive approach enriches biodiversity, stores carbon, purifies water and reduces pandemic risks.



1. The Economics of Biodiversity: The Dasgupta Review – Headline Messages, (February 2021), pg. 1  
2. Costanza, R., De Groot, R., Sutton, P., Van der Ploeg, S., Anderson, S. J., Kubiszewski, I., & Turner, R. K. (2014). Changes in the global value of ecosystem services. *Global environmental change*, 26, 152-158  
3. World Economic Forum: [WEF New Nature Economy Report 2020.pdf \(weforum.org\)](#)  
4. The Economist: [How should economists think about biodiversity? | The Economist](#)  
5. For example, reports from IPCC, IPBES, IUCN, OECD, World Resources Institute  
6. OECD website: [Home page – OECD](#)

# Nature in numbers

The world’s forest area has been cut by over 80 million hectares since 1990 <sup>7</sup>



The Asia-Pacific (ASPAC) region has lost 60 percent of its grasslands due to land-use changes to grazing or conversion to crops <sup>8</sup>

Eight of the top 10 most plastic-polluted rivers in the world are in ASPAC and nearly 25 percent of the region’s species are now threatened <sup>10</sup>



There is an average \$US598 billion biodiversity investment gap per year to sustainably manage biodiversity and maintain ecosystem integrity. <sup>11</sup>

7. [State of the World’s Forests 2020 \(fao.org\)](#)  
8. [Scientists warn of dangerous decline in Asia-Pacific’s biodiversity \(unep.org\)](#)  
9. [Scientists warn of dangerous decline in Asia-Pacific’s biodiversity \(unep.org\)](#)  
10. [Financing Nature: Closing the Global Biodiversity Financing Gap - Paulson Institute](#)

# What is Natural Capital and biodiversity?

When discussing the importance of nature to business, it is helpful to refer to the following terms:

## Biodiversity

This captures the variety of life on earth, including animals, plants and other living organisms and ecosystems in which they live. It underpins and supports everything in the natural world that we need to survive and maintain life.

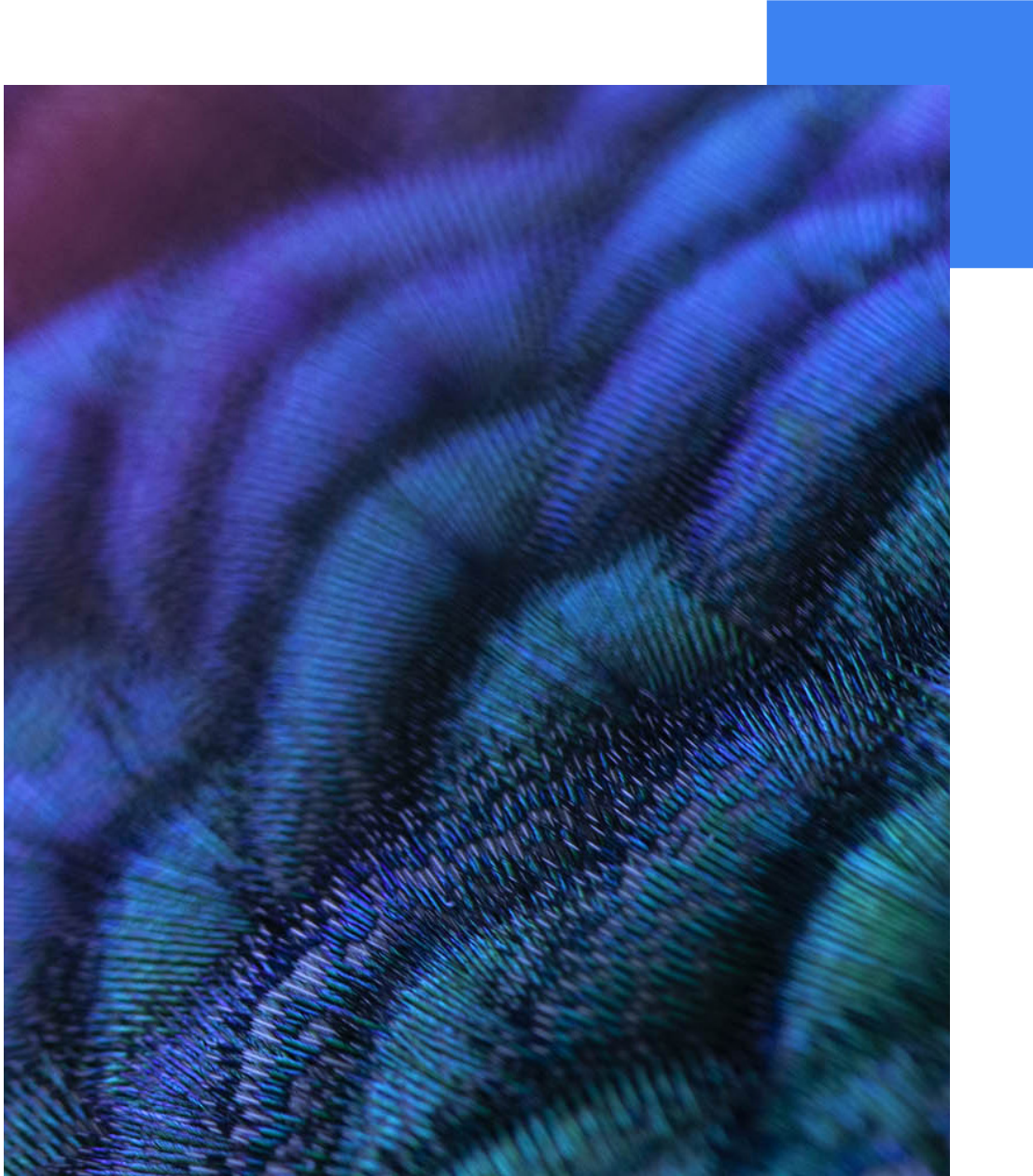


## Natural Capital

This is the stock of the earth’s renewable and non-renewable resources, including trees, soils, air, water, and all living things. It is from these natural assets that a wide range of benefits (often called ecosystem services) are produced. The importance of ecosystem services can be divided into four categories:

1. **Provisioning services:** The products or energy outputs obtained from ecosystems including food, fibre, raw materials, fresh water or medicinal resources

- 2. **Regulating services:** Benefits provided by ecosystems acting as regulators, such as carbon sequestration, local climate and air quality, moderation of extreme weather events and eco-disaster events like bushfires, floods and landslides, and disease regulation
- 3. **Supporting services:** For example, nutrient cycling, soil formation and pollination
- 4. **Cultural services:** Recreation and mental and physical health, spiritual and cultural benefits, a sense of place and belonging.



# Why do Biodiversity and Natural Capital matter?

**As businesses continue to evolve their Environment, Social and Governance (ESG) strategies, further consideration of both their impact and dependencies on nature should be assessed. The following five insights are vital for businesses to consider:**

## 1. The economic case for nature is rapidly growing

Capital has traditionally been thought of only as money, but capital describes any resource or asset that stores or provides value to people and the economy. The [new-post 2020 global biodiversity framework](#) and recent game-changing initiatives like the [G7 2030 Nature Compact](#), the [Natural Capital Finance Alliance](#), and the '[Dasgupta Review](#)' – an independent review of the economics of biodiversity by the United Kingdom (UK) HM Treasury, which is expected to set the agenda for the UK Government's 25-year environmental plan<sup>11</sup> – are all poised to underpin a paradigm shift in how we view and value nature.

The initiatives highlight that the economic case for nature is growing. This will have effects on how nature is valued and accounted for via a more integrated way of reporting to reflect the true 'economic value' of nature. Reporting will demonstrate our impact and dependency on nature across society as well as private and public market investors.

What this means for business and investors is that non-financial biodiversity information that might not have been relevant a few years ago in business, investment, lending, underwriting and policy decision-making, is relevant now.

## 2. Natural Capital and long-term value creation

By recognising and valuing nature for reporting in a more integrated and holistic manner, it enables organisations to better understand the full implications of the choices they make. It empowers corporations and investors (public and private) to make smarter, 'nature-positive' economic, investment, risk management and policy decisions for the benefit of both current and future generations. In turn, this offers the opportunity to increase businesses' resilience, and allows for better engagement with clients, shareholders, investors and the supply chain. It also helps businesses to better respond to increasing regulation.

## 3. Nature-related risks are becoming increasingly visible

Whilst more work is needed to integrate biodiversity considerations into risk management, biodiversity vulnerability assessments, and integrated accounting standards and reporting disclosures, an increasing number of initiatives and stakeholders recognise that biodiversity loss can create a material risk to the profitability of businesses and investors.

This is evident in the food and agribusiness sector, as an example, which is highly natural-resource dependent. Or, in infrastructure and energy, where biodiversity loss created by business decisions can result in high compensation and clean-up costs.

11. <https://www.gov.uk/government/publications/final-report-the-economics-of-biodiversity-the-dasgupta-review>

As transparency requirements increase, through enhanced disclosure and reporting expectations, the reputational risks and risk of litigation, may also increase.

In response, leading financial organisations (including banks, insurers and asset managers) are moving fast to connect the climate and nature-related risk agenda into their approaches to sustainable investing, lending and underwriting practices. This includes reporting on biodiversity portfolio footprints and developing common biodiversity metrics and targets.<sup>12</sup>

The Financial Stability Board, an international body that monitors and makes recommendations about the global financial system, and the Network for

Greening the Financial System, a coalition of 87 central banks and supervisory institutions, agreed that climate change and environmental risks also represent a systemic risk for the entire financial services industry and real economy. Similarly, the Sustainable Insurance Forum, a global network of 30 insurance supervisors and regulators working to strengthen understanding and responses to sustainability issues, is undertaking a global landmark study on the financial risks of biodiversity loss to analyse how the insurance sector is responding to this challenge.

### Formalising disclosure

The Taskforce on Nature-Related Financial Disclosure (TNFD) will complement the Taskforce on Climate-related Financial Disclosures (TCFD), to give investors, lenders, and insurers a holistic picture of the nature-related risks and dependencies. Over the next 2 years, the TNFD will develop and deliver a risk management and disclosure framework for organisations to report and act on their evolving nature-related risks and dependencies, with the aim to support a shift in financial flows towards nature-positive outcomes.



## INDUSTRY SECTORS MOST AT RISK FROM BIODIVERSITY LOSS:

- FOOD AND AGRIBUSINESS
- CONSUMER & INDUSTRIAL MANUFACTURING
- INFRASTRUCTURE
- ENERGY AND NATURAL RESOURCES
- FINANCIAL SERVICES, ASSET MANAGEMENT & INSURANCE

11. <https://www.gov.uk/government/publications/final-report-the-economics-of-biodiversity-the-dasgupta-review>

12. <https://www.unepfi.org/publications/guidance-on-biodiversity-target-setting/>

## 4. Investor demand for Natural Capital and biodiversity is growing

Research by the Paulson Institute estimates that the global investment gap to sustainably manage biodiversity and maintain ecosystem integrity is between US\$598 – US\$824 billion each year.<sup>13</sup> Government funding can be used as a catalyst to stimulate and underwrite private sector capital to encourage the closing of this gap.

Investing in Natural Capital and biodiversity offers businesses an opportunity to design innovative sustainable solutions, and to redirect the global flow of funding away from nature-negative and towards nature-positive activities.

### Nature funding

In 2019, financial flows into global biodiversity conservation were between

**US\$124 and US\$143**

**billion, almost three-times higher than in 2012.**

It is estimated that **US\$722-967 billion** are required

**each year**

**to reverse the decline in biodiversity by 2030.**

On average the biodiversity financing gap is

**US\$711 billion**

**or between US\$598-824 billion per year.**



13. Deutz, A., Heal, G. M., Niu, R., Swanson, E., Townshend, T., Zhu, L., Delmar, A., Meghji, A., Sethi, S. A., and Tobin de la Puente, J. 2020. Financing Nature: Closing the global biodiversity financing gap. The Paulson Institute, The Nature Conservancy, and the Cornell Atkinson Center for Sustainability

## 5. Nature an ally for decarbonisation

Nature, and the biodiversity that underpins it, sits at the heart of climate mitigation and adaptation strategies for both the private and public sector. Global policy makers, capital markets and the private sector are awakening to the fact that nature is our biggest ally in the decarbonisation journey.

Nature-based solutions offer a cost-effective way to address decarbonisation ambitions and are often complementary to existing climate change mitigation and adaptation efforts. It is not possible to move to net zero without harnessing our oceans, soil and forests as natural carbon sinks.

### Targets for nature

There has been an increase in companies announcing climate commitments and establishing ambitious targets in line with climate science. The Science Based Targets Initiative (SBTi), a joint initiative by the Carbon Disclosure Project (CDP), the UN Global Compact (UNGC), the World Resource Institute (WRI), and the World Wildlife Fund (WWF) have supported this progress with the intention of increasing corporate climate action. The aim is to mobilise companies to set greenhouse gas emissions reduction targets consistent with the Paris Agreement – to limit global warming to below 2° above pre-industrial levels, and to help limit warming to 1.5°.

The Science Based Targets Network (SBTN) is expanding this exercise to include nature (on top of climate, land, water, biodiversity and oceans), and for cities in addition to companies. The SBTN has developed Interim Guidance to support companies that wish to advance commitments and start testing science-based targets for nature. In many cases, companies are aware of their impact and dependencies on nature and the actions required, but as with the SBTi, the targets for nature aim to determine ‘how much is enough’ on nature action to reverse nature loss.

## Sustainable Markets Initiative

Launched by His Royal Highness The Prince of Wales at The World Economic Forum 2020, the Sustainable Markets Initiative (SMI) has gathered a global coalition of shared visionaries and announced the ‘Terra Carta’ – a charter that puts nature, people and planet at the heart of global value creation. The initiative aims to develop sustainable markets through a new, improved economic model that operates in favour of people and the planet, while contributing to growth and prosperity.

The three major transformations promoted by the SMI are:

1.

**A dramatic shift  
in corporate  
business models**
2.

**An aligned,  
incentivised  
and mobilised  
financial system**
3.

**An enabling  
environment that  
attracts investment  
and incentivises action**

The Initiative published a 10-point action plan to kickstart action across the next decade, including a plan to invest in Nature ‘as the true engine of the economy’.

# How can businesses become nature-positive?

Organisations that consider natural capital and biodiversity as an integral part of their ESG strategy, particularly pertaining to their environmental goals, can increase their businesses sustainability and resilience, reduce risks, improve their reputation, open up new investor markets, and be ready for emerging regulation.

Importantly, recognising the value of natural capital and biodiversity can help organisations to drive strategies to preserve it, and be ready to capitalise on emerging opportunities in this space.

As organisations move towards valuing their natural capital, some important questions to ask include:



## KEY QUESTIONS TO ASK:

**What is your organisation's awareness and understanding of Natural Capital and biodiversity at board and executive management level?**

**Have you completed a nature-positive readiness review to understand your impacts and dependencies on nature?**

**Have you set biodiversity targets and considered a roadmap to move to nature-positive?**

**Are you familiar with the emerging tools and data sets that can help you to baseline, measure and manage biodiversity?**

**Can your organisation confidently articulate to investors and regulators on the issue of biodiversity?**

**Have you considered the opportunities a nature-positive future might present to your business, including investing in nature-based solutions as part of your climate change and decarbonisation strategy?**

# KPMG's biodiversity and Natural Capital expertise



KPMG has deep experience in supporting organisations to establish their Biodiversity and Natural Capital strategy. We can help organisations to:

- **Develop awareness of Natural Capital and biodiversity and build a clear understanding of their impacts and dependencies on nature**
- **Undertake biodiversity vulnerability risk assessments**
- **Set ambitious and realistic biodiversity targets and prepare a biodiversity roadmap**
- **Provide reporting and assurance on establishing and building a pathway to reduced nature-related risks and moving towards being nature-positive**
- **Become familiar with new technologies, emerging tools and data sets that can support the baselining, measurement and management of Biodiversity**
- **Manage Natural Capital and biodiversity accounting processes as well as the creation of new nature-based financial instruments and solutions to support the preservation of biodiversity**
- **Articulate to investors and regulators on the issue of biodiversity by showing confidence and their capacity to tackle nature-related challenges**
- **Undertake client engagement and facilitation to broker nature-positive investments and operations**
- **Evaluating future opportunities arising from investment in nature-based solutions, also as part of their current climate change and decarbonisation strategy**



## Contact us

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