



# Understanding the stakes of biodiversity

In 1992, when the Convention on Biological Diversity<sup>(1)</sup> was signed at the Earth Summit in Rio de Janeiro, safeguarding biodiversity was a much-debated topic. Since then, as crucial as this topic is, it has been overshadowed by the climate emergency. While a collective awareness is tending to emerge, what is the best way to approach this multi-faceted concept?

## A simple term with numerous implications

“Biodiversity” is a contraction of “biological” and “diversity” meaning the “diversity of living things”, i.e., of the multitude of species and ecosystems. While this concept is relatively simple to define, it is much harder to understand, as it encompasses all species (micro-organisms, plants, and animals) that cohabit within the same space. Species vary by so much that it is extremely difficult to grasp all the nuances that this entails. Organisms, whose diversity is a source of resiliency, form symbiotic relationships, involving the absorption of CO<sub>2</sub>, the food chain, pollination and other factors, which help maintain an often fragile equilibrium that can be disrupted by a single broken link.

## Biodiversity and climate: one common cause

Preserving biodiversity and attenuating climate change are two issues that are fundamentally intertwined. Biodiversity is necessarily affected by climate disruption and its consequences – including drought, melting ice, rising sea levels and others – that disrupt an increasingly precarious equilibria. This harms species, including human beings. Conversely, damage to ecosystems from deforestation, overfishing, water pollution, and so on have a material impact on climatic cycles. The clearest example of this is surely the destruction of the Amazonian rainforest. Trying to act on one issue while neglecting the other could appreciably diminish the impact of any action taken.

## Diminished biodiversity

Over the past few decades, biodiversity issues have often been overshadowed by the climate issue. But the status of biodiversity is no less alarming. Quite the contrary. As a whole, biodiversity shrunk by 28% from 1970 to 2008, according to the WWF’s Living Planet index<sup>(2)</sup>. At the current pace, the UN estimates that urbanisation, deforestation and current farming practices could lead to the degradation of 16 million km<sup>2</sup> of land by 2050<sup>(3)</sup> – as much as all of South America. Meanwhile, the IPBES<sup>(4)</sup> – the equivalent of the IPCC<sup>(5)</sup> for biodiversity

### The three levels of biological diversity:

- **Ecological diversity:**  
diversity of ecosystems
- **Specific diversity:**  
diversity of species within an ecosystem
- **Genetic diversity:**  
diversity of alleles within a species, an essential characteristic for adapting and surviving

(1) CBD, or the Rio Convention: an international adopted at Rio de Janeiro in 1992 with the main goals of preserving biodiversity, using biodiversity resources sustainably, and sharing the advantages of the use of genetic resources fairly and equitably.

(2) Source: Living Planet report, Biodiversity, Biocapacity and Better Choices, WWF, 2012.

(3) Source: Global Land Outlook, Land Restoration for Recovery and Resilience, United Nations, 2022.

(4) IPBES: Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.

(5) IPCC: the 195-member Intergovernmental Panel on Climate Change, established in 1988 by the United Nations Environment Program and the World Meteorological Organization.



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– reports that 75% of land ecosystems and 66% of marine ecosystems are being severely degraded by human activities, that 85% of the world's wetlands have vanished, and that 1 million species are currently threatened with extinction. The IPBES has also identified five direct causes behind the loss of biodiversity – changing use of sea and land, direct exploitation of organisms, climate change, pollution and invasive non-native species. These five so-called “pressures” are due essentially to human activities.

## **An essential link in our value chains**

Mankind exerts a considerably negative impact on biodiversity through economic activities and contributes directly to the five pressures identified by the IPBES, either structurally or occasionally. And yet, biodiversity plays a key role in a healthy economy. This symbiotic relationship has given rise to the concepts of “eco-systemic services” and “natural capital”. Eco-systemic services are the services performed by nature, including pollination, absorption of greenhouse gases, water filtration, and others. Natural capital means all renewable natural assets, whether of plant or animal origin, and non-renewable ones, such as minerals, that provide said services. Natural capital is equivalent to a stock when eco-systemic services is more like a flow but both are intrinsically linked to biodiversity and the decline of this latter engenders a material economic and financial risk.

## **What nature is worth**

To grasp nature's contribution to human activities, the World Economic Forum has determined that more than half of global GDP – about 44,000 billion dollars<sup>(6)</sup> – would be potentially threatened by biodiversity loss. Likewise, researchers have been able to assess biodiversity's contribution to various economic sectors. The vanishing of pollinisers (e.g., bees and bumblebees), would threaten 5% to 8% of global agricultural output, worth between 235 and 577 billion dollars<sup>(7)</sup>. More than one third of the global population and entire swaths of our economies, including those that address primary needs, depend directly on nature and the sometimes microscopic components of biodiversity. So, it is worth taking full measure of this dependence and the repercussions of our activities to prevent a runaway domino effect.

## **The financial sector: a powerful lever in helping preserve biodiversity**

As part of our responsible investor approach and our climate initiatives, we have joined the Finance for Tomorrow<sup>(8)</sup> working group on biodiversity. We want this to help us better grasp this issue, raise awareness among economic actors of their impact, and help cast light and disseminate best practices or even pushing regulation in the right direction. We have also established a partnership with Carbon4 Finance<sup>(9)</sup> and CDC Biodiversité<sup>(10)</sup>, two benchmark organisations on environmental issues, in order to measure the impacts of our investments, while trying to identify their main causes. With this in mind, we want to define the most relevant methodology and indicators for taking into account the risks and opportunities that arise from our investments and, ultimately help steer financial flows towards actors offering real-world responses to this key challenge of transitioning towards a sustainable world.

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(6) Source: Nature Risk Rising report, 2020.

(7) The report of the Global Assessment of Biodiversity and Ecosystem Services, IPBES, 2019.

(8) French organisation gathering all the private, public and institutional players in the Paris EUROPLACE who wish to commit to sustainable finance.

(9) Independent consulting firm specialising in energy and climate issues.

(10) Subsidiary of the Caisse des Dépôts developing solutions for the preservation of biodiversity.



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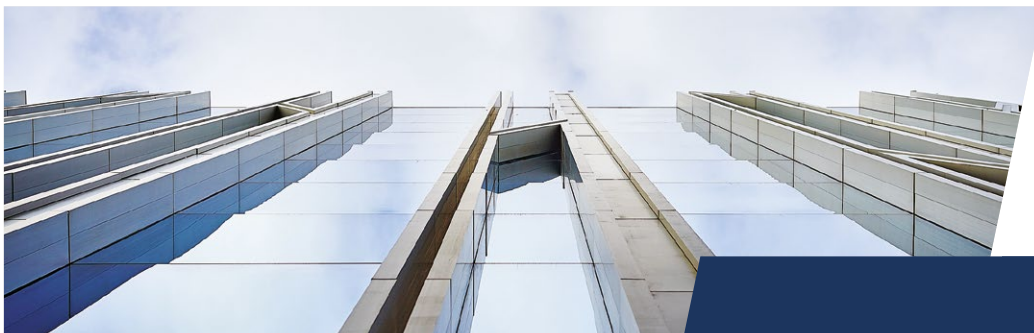
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