

**Biodiversity:**  
risks & opportunities for investment

Biodiversity is on the agenda of businesses, governments and academia for a long time already. However, many asset managers and asset owners remain slow in integrating biodiversity in financial analyses, resulting in consequential risks and missed opportunities.

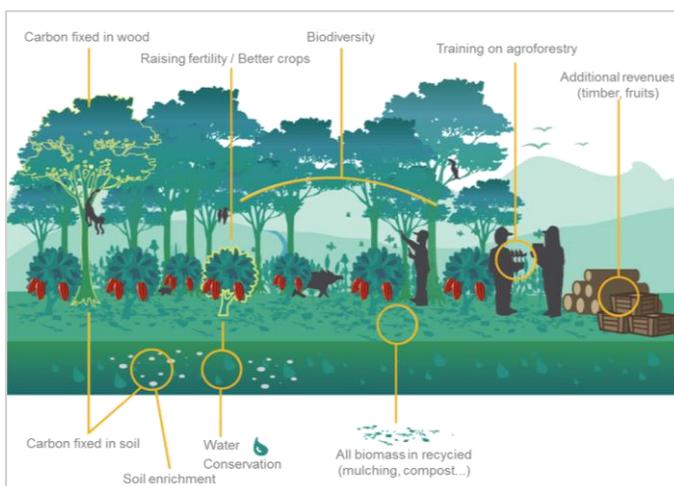
Biodiversity is a cornerstone of natural capital. Natural capital consists of stocks of natural resources such as plants, water, minerals and animals, as well as the processes which make them available like healthy soils, forests and oceans, all of which fall under the term 'ecosystem services'. From agriculture to energy, mining to pharma: many businesses simply cannot do without the ecosystem goods and services biodiversity helps make available. A study estimated the total value of the ecosystem services provided by an open ocean to be 490 int\$/ha/year, while that of coastal wetlands is as much as 190,000 int\$/ha/year<sup>1</sup>.

Besides being highly material for certain sectors, biodiversity is also a top priority for governments and academia. As one of nine planetary boundaries, related to seven UN Sustainable Development Goals (SDGs) (explicitly SDG 14 en 15), the subject of a UN Convention and the focus of a European Commission platform, biodiversity is clearly high on the agenda.

## BIODIVERSITY IN PRACTICE

It is thus no surprise that many companies have been aligning their operations towards preventing biodiversity loss in the context of sustainable practices and mitigating supply chain risks. For example, Starbucks encourages its farmers to cultivate shade-grown coffee by growing trees which serve as habitats for natural pest controllers and pollinators while improving soil conditions<sup>2</sup>. See below figure for an illustration of the various values generated by such practices, like higher coffee bean yields and revenues from timber. In Spain, the water infrastructure provider Aqualia employs hydroseeding, a replanting method used to revegetate land and prevent soil erosion as a means of effective water resource management<sup>3</sup>. Meanwhile, PharmaMar develops drug compounds inspired by natural molecules found in marine ecosystems using scuba divers to manually collect samples instead of mechanized trawling or dredging, so as to preserve local flora and fauna<sup>3</sup>.

**Agroforestry combines the growth of trees or shrubs with crops to e.g. increase biodiversity, promote soil enrichment and prevent erosion, reduce pests and disease to promote agricultural yields**



Source: <http://www.purprojet.com/agroforestry-and-reforestation/>

This is a publication of our ESG-team of 8 professionals with an average experience of 10 years in the industry.

ACTIAM is *the* responsible asset manager for more than one million people. With over 100 staff we manage €54.1bn (ultimo December 2017) primarily for insurance companies, pension funds, banks and intermediaries. ACTIAM invests for its clients not only to achieve an optimal financial return, but also a social return. We do this by taking into account the consequences for the environment and society and continue to develop responsible investment solutions for the general public.

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<sup>1</sup> [https://ac.els-cdn.com/S2212041612000101/1-s2.0-S2212041612000101-main.pdf?\\_tid=1dcbef79-e912-4907-a3f9-4cd67bd9ad49&acdnat=1529590485\\_8e314a31f72e07b8665649a06e32613e](https://ac.els-cdn.com/S2212041612000101/1-s2.0-S2212041612000101-main.pdf?_tid=1dcbef79-e912-4907-a3f9-4cd67bd9ad49&acdnat=1529590485_8e314a31f72e07b8665649a06e32613e)

<sup>2</sup> <https://news.starbucks.com/news/sustainability-is-at-the-heart-of-starbucks-coffee-sourcing>

<sup>3</sup> [https://www.iberdrola.com/wcorp/gc/prod/en\\_US/sostenibilidad/docs/CatalogoBiodiversidad.pdf](https://www.iberdrola.com/wcorp/gc/prod/en_US/sostenibilidad/docs/CatalogoBiodiversidad.pdf)

In all cases, encouraging biodiversity and/or preventing its loss mitigates long-term risk and generates opportunities for business and investment. For example, Unilever considers biodiversity in their supply chain strategies through their Biodiversity Action Plan and 2020 Net Zero Deforestation goal and takes active steps to implement such measures, thereby ensuring long-term sustainability of the agricultural systems it sources from. In contrast, other companies compose an investment risk, such as Wal-Mart Stores Inc., which has consistently generated negative impacts on biodiversity through its contribution to habitat loss by developing land known for being home to endangered species for their operations. In spite of all this, why has biodiversity up to now not been strategically considered by asset owners and managers or become mainstream in sustainable investing practice?

### DIFFICULT TO MATERIALIZE, BUT MOVING UP THE AGENDA

Our experience indicates two main reasons. First, biodiversity's financial materiality, unlike other aspects of natural capital has not entered mainstream thinking biodiversity, because it is defined as the "...diversity within species, between species and of ecosystems"<sup>4</sup>. In contrast to the relatively more direct impacts and risks of carbon emissions, compromised mineral stocks or water supply, the risks of biodiversity loss are perceived to be indirect and the dependencies thereupon unclear. This fact has to do with the complexity of ecosystem dynamics and how many interactions between different players within an ecosystem are required for the generation of natural capital. The figure below shows this complexity in relation to soil.

Secondly, biodiversity gain and loss are difficult to quantify for many stakeholders and specifically for financial institutions. There is no consensus on which indicators are relevant or practical to measure, nor is there agreement on which approach should be taken, be it footprinting as for carbon, or alternative metrics focusing on preemptive mitigation strategies. Furthermore, company-level reporting and data remain highly fragmented, which makes developing methodologies challenging.

ACTIAM believes that biodiversity considerations are fundamental to our sustainable investment strategy. Not only does it underpin ACTIAM's focus themes - biodiversity affects and is affected by land, water and climate - it also generates long-term financial and societal returns.

The complex interactions of flora, fauna and natural processes within soils support soil functions which deliver ecosystem services



Source: <http://www.fao.org/resources/infographics/infographics-details/en/c/284478/>

Likewise, asset owners have a stake in considering biodiversity, as it is a potential financial risk that can generate financial losses. Currently, many asset owners are focusing merely on the effects of climate change as part of the bigger picture of aligning with the 2 degree Paris climate target. However, it is becoming increasingly important to also consider the potential financial risks related to biodiversity-related issues such as deforestation, land use change and ecosystem destruction. Especially, since these compromise nature's carbon capture and storage abilities, not to mention the material risks of biodiversity loss in certain sectors.

Besides companies like the aforementioned PhamaMar, whose pharmaceutical product development relies directly on the biodiversity of marine ecosystems, companies reliant on natural capital and ecosystem services are vulnerable to such risks. Out of 265 companies across 6 industries (diversified metals, food products, oil and gas, paper products and forestry, precious metals and steel), 80% already report on biodiversity and natural capital in the context of the identification of risks<sup>5</sup>. Additionally, governments like that of France are increasingly incorporating biodiversity in national strategies, which could present opportunities for asset owners to capitalize on.

<sup>4</sup> <https://www.cbd.int/convention/articles/default.shtml?a=cbd-02>

<sup>5</sup> MacLaughlin, van der Kruijff & van Dijk (2015). Biodiversity in the Spotlight? Assessing the coverage and quality of reporting on the issues of land use, biodiversity, water and product sustainability by companies worldwide, Sustainalytics, Amsterdam.

## ROLE FOR INVESTORS

ACTIAM has been proactive in demonstrating leadership on integrating biodiversity risks and opportunities in investments.

Both asset owners and asset managers can make a positive biodiversity impact by investing for instance in Green Bonds. In 2017, a specific part of our AUM were contributed to SDGs 14 and 15, Life on Land and Life on Water. Furthermore, commitment to biodiversity reporting according to best practices can also be shown by implementing an assessment process of Green and Social Bonds<sup>6</sup>.

Active ownership can also be an instrument to incorporate biodiversity within your investments. For example: this year ACTIAM engaged on biodiversity with 15 companies in Asia, Latin America and Europe in sectors as diverse as oil and gas, paper, food products and metals & mining. And asset owners can also exercise their voting rights on initiatives relating to deforestation, pesticide pollution and the protection of public health and pollinators.

On sharing and developing knowledge, usually asset managers take the lead. ACTIAM is leading the dialogue on ambition-setting at the EU Business@Biodiversity Platform. Besides, we are collaborating with ASN Bank, CDC Biodiversité and other partners on developing a biodiversity footprinting method for financial institutions in efforts to offer a solution for the overall financial sector. We have also worked directly with the Cambridge Conservation Initiative to incorporate biodiversity into Natural Capital Protocol evaluations.

Moving forward, we believe both asset owners and asset managers should intensify the aforementioned efforts as part of incorporating biodiversity into investment considerations. The considerable momentum in the investment community is encouraging, including initiatives and platforms like the Business and Biodiversity Offset Programme (BBOP), Conference of the Parties (COP) on the UN Convention on Biological Diversity and the Cancun Business and Biodiversity Pledge which ACTIAM is a signatory of, with the hope of generating positive impact on both financial and natural capital.

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<sup>6</sup>[https://www.actiam.nl/nl/documenten/verantwoord/documents/visie\\_op\\_beleggen\\_in\\_groene\\_en\\_sociale\\_obligaties.pdf](https://www.actiam.nl/nl/documenten/verantwoord/documents/visie_op_beleggen_in_groene_en_sociale_obligaties.pdf)