GENERALI INSURANCE ASSET MANAGEMENT

# BIODIVERSITY:
## UNDERSTANDING A KEY NEW GLOBAL INVESTMENT TREND

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Tackling biodiversity loss in our natural world is a major challenge and urgent new focus for governments, businesses and society. The Investment, Market and Macro Research, and ESG Integration & Solutions teams at Generali Insurance Asset Management dive into what investors need to know about this increasingly important investment driver and how to distinguish biodiversity-related risks and opportunities.

- Biodiversity conservation is integral to the sustainable transition of the global economy and achieving decarbonisation goals.
- A landmark UN biodiversity agreement seeks to significantly leverage private finance to achieve new global targets to protect 30% of land and 30% of costal and marine areas by 2030.
- The biodiversity risk premium will increase, so integrating biodiversity criteria into investment processes is crucial.
- As company reporting on biodiversity is inconsistent and sparse, ESG engagement is the best tool for asset managers to identify the future industry leaders in the sustainable transition, and help improve laggards.

### Biodiversity set to be a major global investment trend by 2030

Biodiversity overwhelmingly affects all aspects of our lives and economics. Biodiversity is indicator of the health of an ecosystem; when biodiversity loss happens, ecosystems break down.

To give an idea of its potential economic value, the World Economic Forum reported in 2020 that $44 trillion of value generation – over half the world's total GDP – is moderately or highly dependent on nature and, as a result, exposed to material risks from nature loss.

In our view, we are just at the beginning of a major new long-term investment trend that needs to be better explored and defined.

The conversation is now moving from theory to action. At the 2022 UN Biodiversity Conference (COP15), 188 countries agreed to protect 30% of land and 30% of costal and marine areas by 2030, as part of the landmark Kunming-Montreal Global Biodiversity Framework.

The framework seeks to substantially increase funding for biodiversity and leverage private finance to boost investment flow. It includes the mobilization of $200bn per year in domestic and international biodiversity-related funding (public and private), raising international financial flows from developed to developing countries to at least $20bn per year by 2025 and $30bn per year by 2030.

### The biodiversity funding gap

The biodiversity funding gap is hard to measure, but according to a study by the Paulson Institute, in order for COP15 to be successful, total annual investment flows into biodiversity conservation need to rise from roughly $140 billion to $700-800 billion, a five-fold increase.[1]

This means new responsible investment opportunities to come for the next few decades. Governments are expected to support the private sector once the definition and monitoring of biodiversity risks and opportunities become clearer.

### The biodiversity risk premium: Challenges and opportunities

We expect that in the future, companies with higher biodiversity risk will trade at a discount and have higher costs in accessing debt, as is currently the case for those with lagging ESG scores.

The integration of biodiversity into investment strategies is still in its early stages. Despite this, there has been a significant increase in the number of biodiversity-related funds, with equity funds dominating the market.

The first challenge investors face is the quality of available data. Although more companies are making pledges to protect biodiversity, only a small percentage within the Eurostoxx index have set specific targets.

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Encouraging greater transparency and reporting through engagement is crucial to address this challenge.

The second challenge lies in the limited availability of investments focused on biodiversity solutions. Companies addressing biodiversity issues tend to be small or mid-cap, making it difficult to create a well-balanced portfolio, especially in fixed income. However, as companies communicate more precisely on their biodiversity impact, we expect new solution-focused investment alternatives will emerge.

The third challenge investors face are the sector biases introduced by the simplistic methodologies. Using one single metric may lead investors to overweight sectors with limited impact, such as technology and consumer.

[1] Pualson Institute, September 2020: Financing Nature: Closing the Global Biodiversity Financing Gap - Paulson Institute

As the biodiversity risk premium increases, the integration of biodiversity criteria into the investment process will be crucial for generating performance and capturing emerging medium- to long-term risks.

Additionally, we expect a shift in the allocation of green bond proceeds towards biodiversity-related projects, starting with sovereign green bonds and extending to corporate green bonds in the fixed income space.

## GIAM's sector impact and dependency mapping

The first step for investors to identify the biodiversity risks and opportunities within their portfolio is to create materiality metrics that comprise both biodiversity impact and dependence.

"Biodiversity impact" refers to human activities while "biodiversity dependence" refers to the degree that economies and societies rely on nature to function without disruption.

The degree of impact and dependency varies significantly among sectors. Energy, utilities, communication services, for example, depend on biodiversity to a lesser extent than the impact they generate. Within each sector, impact and dependence may be more prominent for some drivers (terrestrial ecosystem use, water use, soil pollutants) and ecosystem services (materials, soil quality, materials, water), than others.

In Figures 1 and 2, we used the ENCORE database and applied it to the MSCI AWCI Index to aggregate the level of biodiversity impacts and dependencies for each sector, ranging from 0-5, where 5 is the highest level.

Consumer staples, energy, materials and utilities (unsurprisingly) contribute the most to the biodiversity loss. On biodiversity dependencies, ENCORE mapping confirms that ground and surface water appear as the most important resource for all sectors, followed by protection against flood and storm threats.

*Figure 1. Sector impacts on biodiversity*

| | Land/Water/Sea Use | | | Climate | Overexploitation | | Pollution | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Biodiversity impact drivers | Terrestrial ecosystem use | Freshwater ecosystem use | Marine ecosystem use | GHG emissions | Water use | Other resource use | Non-GHG air pollutants | Soil pollutants | Solid waste | Water pollutants | Disturbances |
| **Communication Services** | **3.59** | 0.33 | 0.00 | 0.05 | 0.00 | 0.00 | 0.04 | 1.69 | 2.53 | 1.69 | 0.69 |
| **Consumer Discretionary** | 0.34 | 0.24 | 0.10 | 2.30 | 2.34 | 0.00 | 2.33 | 2.59 | **3.47** | 2.63 | 1.80 |
| **Consumer Staples** | 0.61 | 0.47 | 0.14 | **3.62** | **3.92** | 0.67 | 0.60 | **3.32** | **3.35** | **3.32** | 0.07 |
| **Energy** | **3.18** | 2.50 | 1.68 | **3.48** | **4.29** | 0.00 | **3.42** | **3.07** | 2.56 | **3.07** | 2.49 |
| **Financials** | 0.01 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.01 | 0.01 | **3.00** | 0.01 | 0.00 |
| **Health Care** | 0.00 | 0.00 | 0.19 | 0.64 | 2.39 | 0.00 | 2.04 | 2.81 | **3.32** | 2.81 | 0.25 |
| **Industrials** | 0.62 | 0.50 | 0.91 | **3.12** | 2.41 | 0.00 | 2.54 | **3.17** | 2.93 | **3.20** | 2.95 |
| **Information Technology** | 0.01 | 0.00 | 0.05 | 1.29 | 1.22 | 0.00 | 0.07 | 2.92 | 2.03 | 2.92 | 1.31 |
| **Materials** | **3.15** | 1.24 | 0.33 | **3.29** | **4.32** | 0.00 | **3.22** | **3.21** | **3.28** | **3.34** | 1.24 |
| **Real Estate** | **4.96** | 0.00 | 0.00 | **3.97** | 0.00 | 0.00 | 2.98 | 2.98 | **3.99** | 2.98 | 0.00 |
| **Utilities** | 1.20 | 2.49 | 0.63 | **3.77** | **3.48** | 0.00 | 2.69 | 1.81 | 2.69 | 2.58 | 2.26 |

*Figure 2. Sector dependencies on biodiversity*

| | Direct physical input | | | | Enables production process | | | Mitigates direct impacts | | | | Protection from disruption | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ecosystem services | Fibres & other materials | Genetic materials | Ground water | Surface water | Water flow maintenance | Water quality | Soil quality | Filtration | Dilution by atmosphere & ecosyst. | Bio-remediation | Mediation of sensory impacts | Mass stabilisation & erosion control | Flood & storm protection | Climate regulation |
| **Communication Services** | 0.00 | 0.00 | 0.08 | 0.09 | 0.00 | 0.00 | 0.49 | 0.01 | 0.03 | 0.03 | 0.03 | 0.52 | **4.06** | 2.92 |
| **Consumer Discretionary** | 0.68 | 0.00 | **3.01** | 2.86 | 1.90 | 1.53 | 0.12 | 0.87 | 1.68 | 0.47 | 1.49 | 1.55 | 2.87 | 1.36 |
| **Consumer Staples** | 1.12 | 0.74 | **4.65** | **4.62** | 2.51 | 2.36 | 1.35 | 1.58 | 1.89 | 1.22 | 0.00 | 1.92 | 2.48 | 0.45 |
| **Energy** | 0.00 | 0.00 | 2.31 | 2.11 | 0.82 | 1.41 | 0.00 | 0.92 | 0.19 | 0.85 | 0.19 | 2.30 | 2.31 | 2.29 |
| **Health Care** | 0.00 | 1.79 | 2.72 | **3.56** | 1.79 | 1.20 | 0.00 | 0.60 | 0.24 | 0.60 | 0.00 | 1.55 | 0.19 | 0.25 |
| **Industrials** | 0.02 | 0.00 | 2.49 | 2.50 | 1.43 | 1.08 | 0.06 | 0.54 | 1.55 | 0.10 | 1.36 | 1.53 | 2.34 | 1.54 |
| **Information Technology** | 0.00 | 0.00 | 1.70 | 1.70 | 0.00 | 0.00 | 0.00 | 0.82 | 1.13 | 0.00 | 0.00 | 0.07 | 0.07 | 0.09 |
| **Materials** | 0.16 | 0.07 | **3.63** | **3.64** | 2.36 | 1.04 | 0.03 | 0.46 | 0.41 | 0.55 | 1.09 | 1.86 | 1.37 | 1.97 |
| **Real Estate** | 0.02 | 0.00 | **3.01** | **4.00** | 0.00 | 0.01 | 0.00 | 0.99 | 0.00 | 1.99 | 1.99 | 2.00 | 1.01 | 0.02 |
| **Utilities** | 0.54 | 0.00 | 2.30 | **3.43** | 2.30 | 1.57 | 0.17 | 1.41 | 0.00 | 0.84 | 0.33 | 2.54 | **3.23** | 1.66 |

Source figures: Generali Insurance Asset Management, 2023

## How we integrate biodiversity criteria into the investment process

Despite poor data reliability and the lack of a clear regulatory framework, at GIAM we incorporate potentially severe biodiversity risks into our investment process.

As mentioned, given the complexity of how biodiversity impacts and interacts with our economy, we believe biodiversity-related investment decisions should not rest solely on a single indicator.

Our sector impacts and independence mapping is followed by a company biodiversity risk management assessment to identify the leaders and laggards within each sector, to avoid sector-biased investment decisions.

More specifically, the ESG profile assessed for single issuers and sectors together with the controversy analysis are structural components of the exclusion policy adopted within our portfolios. This enables us to detect ex ante biodiversity risks among investment opportunities, and also carefully manage existing positions with emerging critical issues.

Issuers that are screened as ESG laggards within their sector (or among countries in the case of sovereign issuers), or that are subject to severe and structural controversies (including biodiversity matters), are normally excluded from the investment universe and, if considered a valuable investment case, can be considered as candidates for engagement activity. Existing exposure to issuers falling within the exclusion filters is brought to zero for equity positions or gradually reduced in case of fixed income securities.

Going forward, we believe a stronger integration framework requires analysis of each biodiversity loss driver pillar: Land/Water use, Resource Exploitation, Pollution, Climate Change, and Invasive Alien Species.

We are also taking a proactive approach to assess how issuers may be impacted by increasing regulations including but not limited to: EU Regulation on deforestation-free products, EU Nature Restoration Law, EU Regulation on Eco-design, and EU Regulation on Sustainable use of Pesticide and its consequences to issuers. We acknowledge that issuers need time to update their business models to be compliant with regulations, especially for the compliance along their supply chain(s). Quantifiable commitments are good starting points to identify and support issuers in minimizing both their impacts on biodiversity and the impacts of biodiversity regulations on their financial performance.

## Engagement Case Study: Bayer

One example of our engagement activities is with Bayer, the global health and agriculture company, who we have been in dialogue with since 2018 about the environmental impact of its crop science products. We have worked closely on their Environmental Impact Reduction target of -30% by 2030 and finalized our expectations to the company regarding:

- Crop science impact: To develop a methodology to measure impact, scope, consultation, link with remuneration, action plan, advocacy, and pedagogy.
- Financial and extra-financial communication related to the target.

We have been pleased to see a change in the company's approach with more data and disclosure about their environmental reduction target. The company reported that engagement has helped to facilitate a stronger internal focus to invest more in sustainable innovation, for example by replacing old chemistry with new. We continue to engage on lobbying and scientific affairs, product stewardship in crop sciences, ESG integration in M&A, and governance.

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## Outlook: Improving regulatory frameworks and engagement

Strong regulatory and disclosure initiatives at both global and EU level present promising signs. The Taskforce on Nature-related Financial Disclosures (TNFD) is an important market-led global initiative to solve the data obstacle. The framework provides companies with guidelines on biodiversity metrics to disclose to increase transparency with stakeholders. The final version of the TNFD framework is expected to be released by September 2023 but we expect that the adoption phase will need time to take shape, due to the data challenges.

At EU level, the finalization of the Corporate Sustainability Reporting Directives (CSRD) and EU Taxonomy regulation on four remaining objectives (water and marine, circular economy, pollution, and biodiversity protection and restoration) acts as a strong regulatory push for companies to start gathering information on their biodiversity profiles ahead of legal changes expected in 2024-2025.

Until then, we believe that engagement is the best instrument for asset managers to understand the biodiversity footprint and ambitions of companies and issuers. Given the complexity of the biodiversity theme, engagement can focus firstly on factors that companies should have already measured, such as water consumption, waste management, and particularly climate change strategies.

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