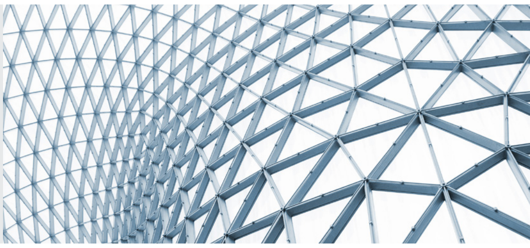
NATIXIS
INVESTMENT MANAGERS

The HUB

NEWS AND VIEWS FOR INSTITUTIONAL INVESTORS



Find out more:
im.natixis.com/en-institutional

Biodiversity: the missing piece in the ESG puzzle

Sidelined by investors' focus on carbon emissions, biodiversity can no longer be ignored

Key Takeaways:

- Investors' efforts in tackling climate change have focused predominantly on energy, utilities and transportation. Agriculture and food are less visible because there is less awareness among investors, less attention in the media and there are fewer IPOs that can attract interest form the financial community. There is also the difficulty of measuring biodiversity.
- Mean Species Abundance (MSA) is a good indicator for capturing and quantifying biodiversity loss. The MSA measures the impact on the biodiversity as the difference between the state of the biodiversity before and after a corporate activity. This difference is expressed as the loss in biodiversity relative to the "undisturbed" natural state.
- Investors can play a leading role in preventing damaging biodiversity loss by engaging with companies and pushing them to improve practices. They can set ambitious, tangible targets to promote a culture of biodiversity awareness.

Sustainability efforts to date have focused overwhelmingly on climate change. They typically involve the measurement and management of carbon emissions, which is a good step, but one which misses a significant piece of the sustainability puzzle.

If investors take the same steps in biodiversity as they have in carbon emissions reporting and mitigation, their portfolios would be more sustainable and they could better mitigate their ESG risks.

Carmine de Franco
Head of Research
Ossiam

Why is biodiversity relevant to investors?

Biodiversity is what makes life possible. Our livelihoods depend upon it, as do our economies. It is estimated that between 15% and 45% of world GDP is directly linked to biodiversity.

Agriculture and food in particular have a high impact on biodiversity. These two sectors are responsible for 26% of global GHG emissions, while 60% of biodiversity loss is caused by agricultural practices.

The current debate on sustainability has led investors to focus predominantly on energy, utilities and transportation, and these sectors have seen huge sustainability improvements in recent years, mainly relating to climate change mitigation.

Agriculture and food are less visible because there are fewer IPOs, less attention in the media and consequently less awareness among investors. In part, biodiversity has not entered the public consciousness to the same extent as climate change because of the difficulty of measuring it.

While biodiversity – the quantum of existing animal and plant species – is simple to grasp as concept, it is not so simple to measure. A ton of CO_2 produced in China, has the same impact on climate change as one produced in Brazil or France. But producing 1kg of meat in one of these countries has very different biodiversity impacts because of the differences in the local ecosystem, farming practices, logistics networks, land uses and so on.

A robust measurement of biodiversity is essential if biodiversity is to be meaningfully integrated into investor portfolios.

Metrics for measuring biodiversity

To date, investors have reported on biodiversity by looking at qualitative data such as companies' commitments, or

ESG scores relating to biodiversity, such as corporate procedures and policies.

A more effective way to measure biodiversity impact is to use physical metrics in the same way that tons of CO_2 have become a standard measure for measuring impact on climate. Only with hard numbers can companies reliably monitor their biodiversity performance, measure it against competitors and report it to investors.

Mean Species Abundance (MSA) is probably the best existing indicator for capturing and quantifying a company's impact on biodiversity. MSA measures the difference in diversity before and after a corporate activity. This difference is expressed as the loss in biodiversity relative to the "undisturbed" natural state.

Analysing the full value chain

Integrating the biodiversity through the MSA indicator in portfolio construction allows a robust quantitative approach to ESG investing. It enables a response to questions such as: how much biodiversity loss can be attributed to the production of 1kg of beef or 1 litre of milk?

Loss of biodiversity due to the food sector can be broken down into four main factors::

1. Land use. The change in biodiversity as forests are converted to farmland.
2. Climate change. The amount of greenhouse gases emissions.
3. Nitrogen oxide emissions. Mainly linked to fertilisers.
4. Water. The amount of freshwater eco-toxicity.

When a company is measured on these key factors, they can be given an aggregate score which represents their biodiversity footprint. Assessment must include the full value chain, from raw material producers, to the transformation of commodities to products, logistics, packaging, and finally to retailing via supermarkets and restaurants.

Clearly granular data is required for this. Some of this data is found in company disclosures, particularly in the few jurisdictions where regulations demand biodiversity reporting. But where disclosure is lacking, proxy models can be created. For instance, McDonald's does not disclose how much meat it sells in each market. "But we can proxy total sales for each market, and you can map this with meat sourcing and local biodiversity, so you can estimate its biodiversity footprint reasonably well," says Carmine de Franco, Head of Research at Ossiam, an affiliate of Natixis Investment Managers.

Initiatives for the reporting of biodiversity are underway in France and the Netherlands, and are being considered in other countries. "Just as carbon footprint reporting has been mandatory in many countries, so biodiversity reporting is likely to become mandatory over time," adds de Franco.

Systematic application of a range of ESG

Since the high-stakes players in biodiversity are in the food and agriculture sectors, the universe of companies for a biodiversity strategy is confined to these sectors. This implies an investment universe of around 250 companies listed in developed markets, whose principal business is related directly or indirectly to food and agriculture.

Companies are selected using a series of quantitative filters. The first removes the bottom 20% of companies ranked by ESG food scores. The next filters remove the worst performing GHG-emitting stocks, controversial companies, companies in breach of the UN Global Compact, tobacco and palm oil stocks.

The final step aims at reducing as much as possible the biodiversity footprint of the portfolio using the MSA metrics. The process is then supported by engagement with investee companies to pursue tangible changes and concrete outcomes.

De Franco says: "In this way, you apply many ESG metrics to a single strategy, with each metric capturing a different ESG issue. You end up with companies that have high ESG awareness, carbon efficiency, low biodiversity impact and, through engagement, companies that commit to do more."

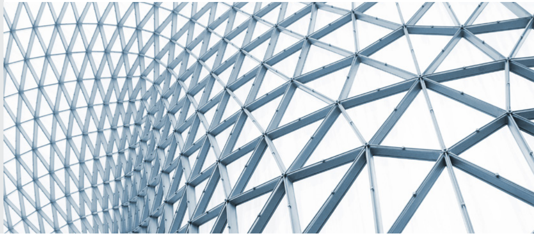
Resulting portfolio is defensive

The resulting portfolio has high exposure to consumer staples and consumer discretionary, which are defensive sectors with low beta, and thus perform well in volatile markets (although the strategy tends to lag in strong bull markets that are driven by technology, energy and financials). "We would not expect this strategy to perform like technology or other high-growth strategies, but agriculture and food is expected to grow in order to meet the demands of a world population that is forecasted at 11bn by the end of the century," says de Franco.

Population growth will be accompanied by a change in diet amid the rise of wealthier middle classes in emerging markets. "The combination of population growth and changes in consumption patterns puts a lot of pressure on biodiversity, as middle-class families in developing countries improve their diets and increase their consumption of dairy and meat, making our strategy very relevant," adds de Franco.

There is already growing public recognition of this pressure on biodiversity. In Europe alone, EU Commission President Ursula Von der Leyen, President Macron of France and Christine Lagarde, president of the European Central Bank, have all recently warned about the impact on biodiversity and natural capital. Meanwhile, the World Economic Forum rated biodiversity loss as the second most impactful risk over the next decade. And the UN PRI has said biodiversity loss is a systemic risk, requiring urgent action by investors.

Regulators are starting to act too, with the implementation in France of disclosure regulation on climate-related issues being supplemented recently by laws on the reporting of biodiversity risks.



Conclusion: investors have power to set tangible targets

Investors can play a leading role in preventing damaging biodiversity loss by engaging with companies and pushing them to improve their practices. They can set ambitious, tangible targets for companies to promote a culture of biodiversity awareness and invest based on a company's impact.

"To improve your sustainability score you can invest in many technology companies, and that's fine, but it won't solve any sustainability problems," says Ossiam's de Franco. "Alongside our investors, we want to have a big impact on sustainability. This means not running away from problems, but identifying the companies that can make the biggest contribution to protecting biodiversity."

Published in July 2021

ADDITIONAL NOTES

This material has been provided for information purposes only to investment service providers or other Professional Clients, Qualified or Institutional Investors and, when required by local regulation, only at their written request. This material must not be used with Retail Investors.
In the E.U. (outside of the UK and France): Provided by Natixis Investment Managers S.A. or one of its branch offices listed below. Natixis Investment Managers S.A. is a Luxembourg management company that is authorized by the Commission de Surveillance du Secteur Financier and is incorporated under Luxembourg laws and registered under n. B 115843. Registered office of Natixis Investment Managers S.A.: 2, rue Jean Monnet, L-2180 Luxembourg, Grand Duchy of Luxembourg. Italy: Natixis Investment Managers S.A., Succursale Italiana (Bank of Italy Register of Italian Asset Management Companies no 23458.3). Registered office: Via San Clemente 1, 20122 Milan, Italy. Germany: Natixis Investment Managers S.A., Zweigniederlassung Deutschland (Registration number: HRB 88541). Registered office: Im Trutz Frankfurt 55, Westend Carrée, 7. Floor, Frankfurt am Main 60322, Germany. Netherlands: Natixis Investment Managers, Nederlands (Registration number 50774670). Registered office: Stadsplateau 7, 3521AZ Utrecht, the Netherlands. Sweden: Natixis Investment Managers, Nordics Filial (Registration number 516405-9601 - Swedish Companies Registration Office). Registered office: Kungsgatan 48 5tr, Stockholm 111 35, Sweden. Spain: Natixis Investment Managers, Sucursal en España. Serrano n°90, 6th Floor, 28006, Madrid, Spain. Belgium: Natixis Investment Managers S.A., Belgian Branch, Gare Maritime, Rue Picard 7, Bte 100, 1000 Bruxelles, Belgium. **In France:** Provided by Natixis Investment Managers International – a portfolio management company authorized by the Autorité des Marchés Financiers (French Financial Markets Authority - AMF) under no. GP 90-009, and a public limited company (société anonyme) registered in the Paris Trade and Companies Register under no. 329 450 738. Registered office: 43 avenue Pierre Mendès France, 75013 Paris. **In Switzerland:** Provided for information purposes only by Natixis Investment Managers, Switzerland Sàrl, Rue du Vieux Collège 10, 1204 Geneva, Switzerland or its representative office in Zurich, Schweizergasse 6, 8001 Zürich. **In the British Isles:** Provided by Natixis Investment Managers UK Limited which is authorised and regulated by the UK Financial Conduct Authority (register no. 190258) - registered office: Natixis Investment Managers UK Limited, One Carter Lane, London, EC4V 5ER. When permitted, the distribution of this material is intended to be made to persons as described as follows: **in the United Kingdom:** this material is intended to be communicated to and/or directed at investment professionals and professional investors only; **in Ireland:** this material is intended to be communicated to and/or directed at professional investors only; **in Guernsey:** this material is intended to be communicated to and/or directed at only financial services providers which hold a license from the Guernsey Financial Services Commission; in Jersey: this material is intended to be communicated to and/or directed at professional investors only; **in the Isle of Man:** this material is intended to be communicated to and/or directed at only financial services providers which hold a license from the Isle of Man Financial Services Authority or insurers authorised under section 8 of the Insurance Act 2008. **In the DIFC:** Provided in and from the DIFC financial district by Natixis Investment Managers Middle East (DIFC Branch) which is regulated by the DFSA. Related financial products or services are only available to persons who have sufficient financial experience and understanding to participate in financial markets within the DIFC, and qualify as Professional Clients or Market Counterparties as defined by the DFSA. No other Person should act upon this material. Registered office: Unit L10-02, Level 10 ,ICD Brookfield Place, DIFC, PO Box 506752, Dubai, United Arab Emirates **In Japan:** Provided by Natixis Investment Managers Japan Co., Ltd. Registration No.: Director-General of the Kanto Local Financial Bureau (kinsho) No.425. Content of Business: The Company conducts investment management business, investment advisory and agency business and Type II Financial Instruments Business as a Financial Instruments Business Operator. **In Taiwan:** Provided by Natixis Investment Managers Securities Investment Consulting (Taipei) Co., Ltd., a Securities Investment Consulting Enterprise regulated by the Financial Supervisory Commission of the R.O.C. Registered address: 34F., No. 68, Sec. 5, Zhongxiao East Road, Xinyi Dist., Taipei City 11065, Taiwan (R.O.C.), license number 2020 FSC SICE No. 025, Tel. +886 2 8789 2788.**In Singapore:** Provided by Natixis Investment Managers Singapore Limited (company registration no. 199801044D) to distributors and institutional investors for informational purposes only. **In Hong Kong:** Provided by Natixis Investment Managers Hong Kong Limited to institutional/ corporate professional investors only. **In Australia:** Provided by Natixis Investment Managers Australia Pty Limited (ABN 60 088 786 289) (AFSL No. 246830) and is intended for the general information of financial advisers and wholesale clients only. **In New Zealand:** This document is intended for the general information of New Zealand wholesale investors only and does not constitute financial advice. This is not a regulated offer for the purposes of the Financial Markets Conduct Act 2013 (FMCA) and is only available to New Zealand investors who have certified that they meet the requirements in the FMCA for wholesale investors. Natixis Investment Managers Australia Pty Limited is not a registered financial service provider in New Zealand. **In Latin America:** Provided by Natixis Investment Managers S.A. **In Uruguay:** Provided by Natixis Investment Managers Uruguay S.A., a duly registered investment advisor, authorised and supervised by the Central Bank of Uruguay. Office: San Lucar 1491, Montevideo, Uruguay, CP 11500. The sale or offer of any units of a fund qualifies as a private placement pursuant to section 2 of Uruguayan law 18,627. **In Colombia:** Provided by Natixis Investment Managers S.A. Oficina de Representación (Colombia) to professional clients for informational purposes only as permitted under Decree 2555 of 2010. Any products, services or investments referred to herein are rendered exclusively outside of Colombia. This material does not constitute a public offering in Colombia and is addressed to less than 100 specifically identified investors. **In Mexico** Provided by Natixis IM Mexico, S. de R.L. de C.V., which is not a regulated financial entity, securities intermediary, or an investment manager in terms of the Mexican Securities Market Law (Ley del Mercado de Valores) and is not registered with the Comisión Nacional Bancaria y de Valores (CNBV) or any other Mexican authority. Any products, services or investments referred to herein that require authorization or license are rendered exclusively outside of Mexico. While shares of certain ETFs may be listed in the Sistema Internacional de Cotizaciones (SIC), such listing does not represent a public offering of securities in Mexico, and therefore the accuracy of this information has not been confirmed by the CNBV. Natixis Investment Managers is an entity organized under the laws of France and is not authorized by or registered with the CNBV or any other Mexican authority. Any reference contained herein to "Investment Managers" is made to Natixis Investment Managers and/or any of its investment management subsidiaries, which are also not authorized by or registered with the CNBV or any other Mexican authority.
The above referenced entities are business development units of Natixis Investment Managers, the holding company of a diverse line-up of specialised investment management and distribution entities worldwide. The investment management subsidiaries of Natixis Investment Managers conduct any regulated activities only in and from the jurisdictions in which they are licensed or authorized. Their services and the products they manage are not available to all investors in all jurisdictions. It is the responsibility of each investment service provider to ensure that the offering or sale of fund shares or third party investment services to its clients complies with the relevant national law.
The provision of this material and/or reference to specific securities, sectors, or markets within this material does not constitute investment advice, or a recommendation or an offer to buy or to sell any security, or an offer of any regulated financial activity. Investors should consider the investment objectives, risks and expenses of any investment carefully before investing. The analyses, opinions, and certain of the investment themes and processes referenced herein represent the views of the portfolio manager(s) as of the date indicated. These, as well as the portfolio holdings and characteristics shown, are subject to change. There can be no assurance that developments will transpire as may be forecasted in this material. The analyses and opinions expressed by external third parties are independent and does not necessarily reflect those of Natixis Investment Managers. Past performance information presented is not indicative of future performance.
Although Natixis Investment Managers believes the information provided in this material to be reliable, including that from third party sources, it does not guarantee the accuracy, adequacy, or completeness of such information. This material may not be distributed, published, or reproduced, in whole or in part.
All amounts shown are expressed in USD unless otherwise indicated.

Ossiam
An affiliate of Natixis Investment Managers
French société anonyme governed by an executive board and a supervisory board
with a share capital of 270 805 €
RCS Paris – 512 855 958
6 place de la Madeleine, 75008 Paris
www.ossiam.com

Natixis Investment Managers
RCS Paris 453 952 681
Share Capital: €178 251 690
43 avenue Pierre Mendès France
75013 Paris
www.im.natixis.com

INTXXX-0721