

Biodiversity in Fixed Income

Prepared for AFM Conference – Oct 2023

Kris Atkinson
Portfolio Manager



October 23

Important information

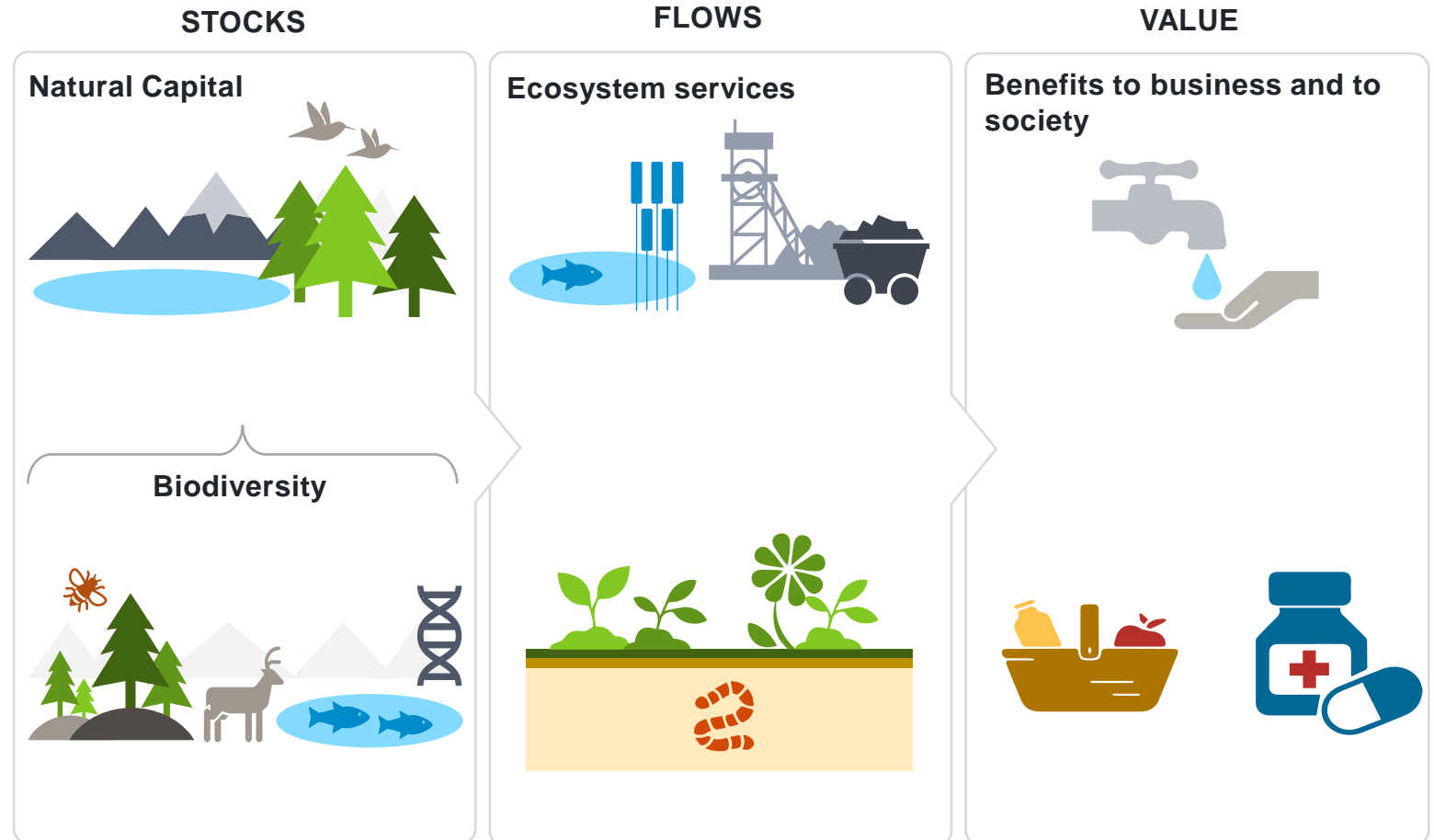
- This material is for Investment Professionals only, and should not be relied upon by private investors
- The value of investments and the income from them can go down as well as up so you/the client may get back less than you/they invest.
- Bonds: There is a risk that the issuers of bonds may not be able to repay the money they have borrowed or make interest payments. When interest rates rise, bonds may fall in value. Rising interest rates may cause the value of your investment to fall.
- Corporate Bonds: Due to the greater possibility of default an investment in a corporate bond is generally less secure than an investment in government bonds.
- Currency Hedging: Currency hedging is used to substantially reduce the risk of losses from unfavourable exchange rate movements on holdings in currencies that differ from the dealing currency. Hedging also has the effect of limiting the potential for currency gains to be made. Emerging Markets: This fund invests in emerging markets which can be more volatile than other more developed markets.
- Derivatives: This fund may make increased and more complicated use of derivatives and this may result in leverage. In such situations, performance may rise or fall more than it would have done otherwise. The fund may be exposed to the risk of financial loss if a counterparty used for derivative instruments subsequently defaults.
- ESG: This fund promotes environmental and/or social characteristics. The Investment Manager's focus on securities of issuers which maintain sustainable characteristics may affect the funds' investment performance favourably or unfavourably in comparison to similar funds without such focus. The sustainable characteristics of securities may change over time.
- Past performance does not predict future returns. The funds returns may increase or decrease as a result of currency fluctuations.
- When referring to sustainability – related aspects of the promoted fund, the decision to invest should take into account all characteristics or objectives of the promoted fund as detailed in the Prospectus.
- Overseas investments will be affected by movements in currency exchange rates. Investments in emerging markets can be more volatile than other more developed markets.

Outlining the problem with Biodiversity loss

What is Biodiversity?

The key definitions

- **Natural Capital** is “the stock of renewable and non-renewable natural resources”¹
- **Biodiversity** is “the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems”²
- **Ecosystem services** are “the contributions of ecosystems to the benefits that are used in economic and other human activity.”³
- **Impacts and dependencies** form the dual lens through which biodiversity needs to be understood.

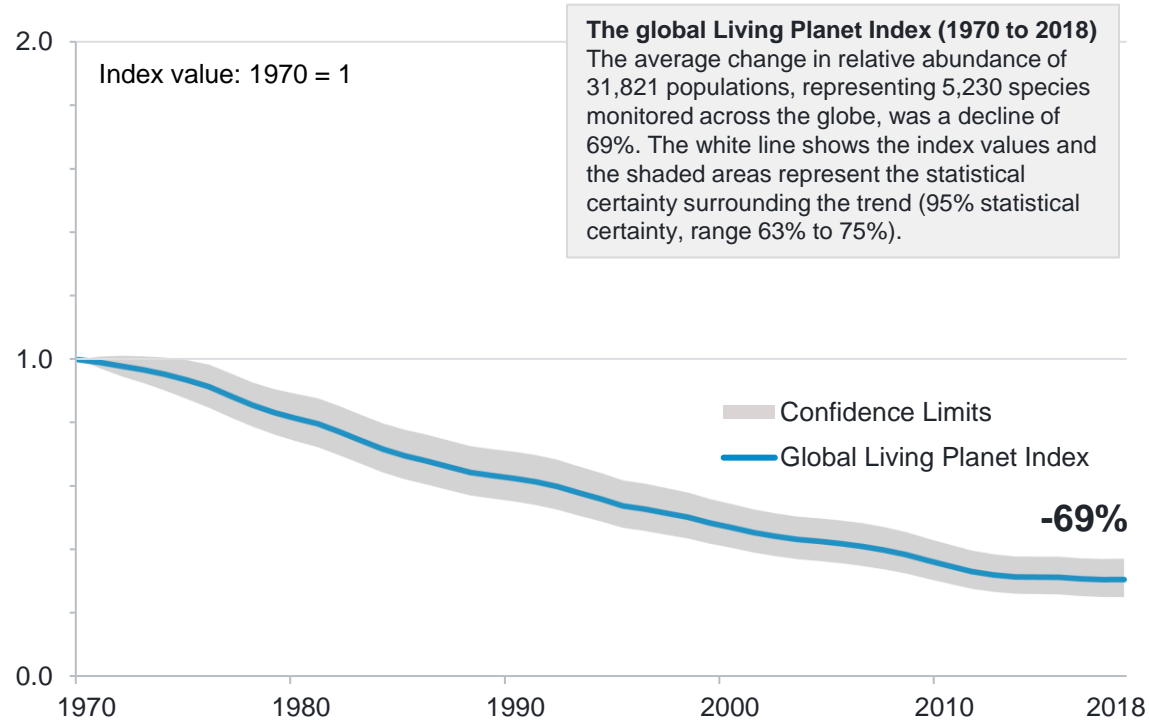


Source: Fidelity International 2023; 1. Capitals Coalition (2016) [Natural Capital Protocol](#) via Taskforce on Nature-related Financial Disclosures [Definitions of nature » TNFD](#), 2. United Nations Convention on Biodiversity (CBD), Convention on Biological Diversity (1992) [Article 2](#) via Taskforce on Nature-related Financial Disclosures [Definitions of nature » TNFD](#), 3. UN (2021) [System of Environmental-Economic Accounting - Ecosystem Accounting](#) via Taskforce on Nature-related Financial Disclosures [Definitions of nature » TNFD](#)

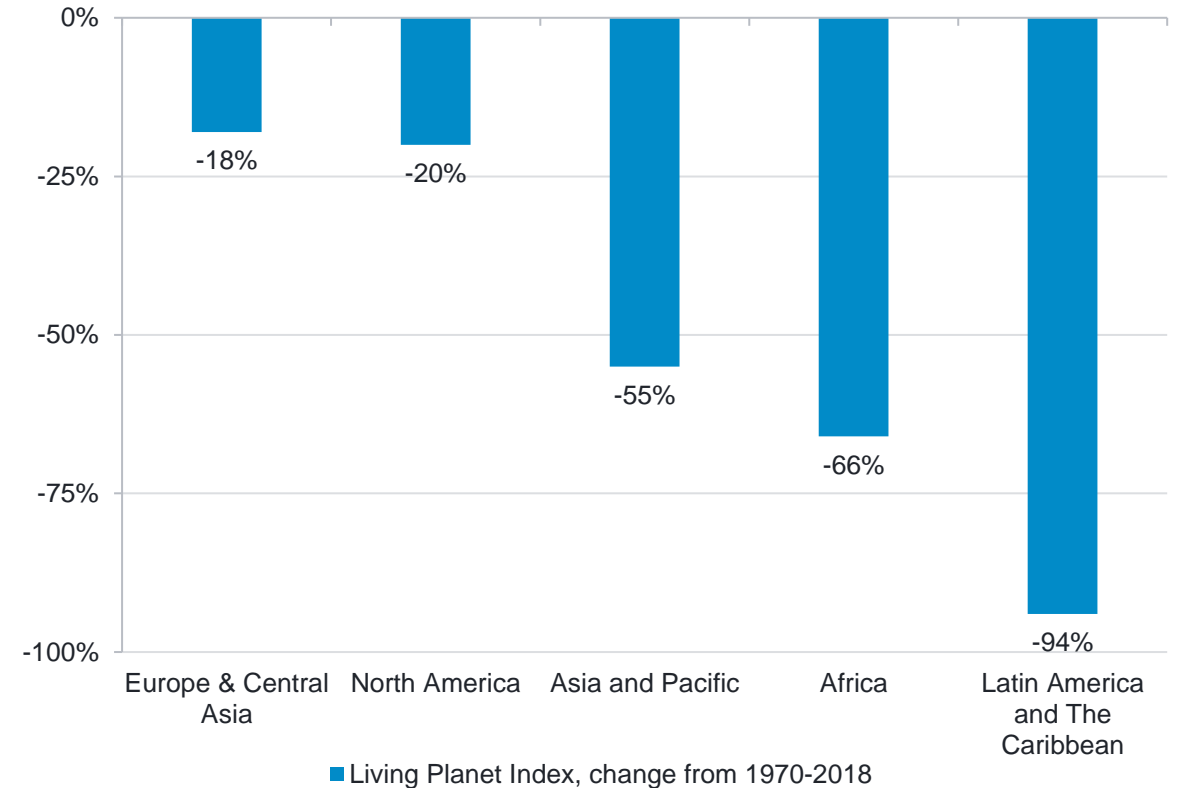
Biodiversity loss is unprecedented and accelerating

The earth is in crisis; we are at a tipping point

Global wildlife populations are down ~70% on average in the past 50 years¹



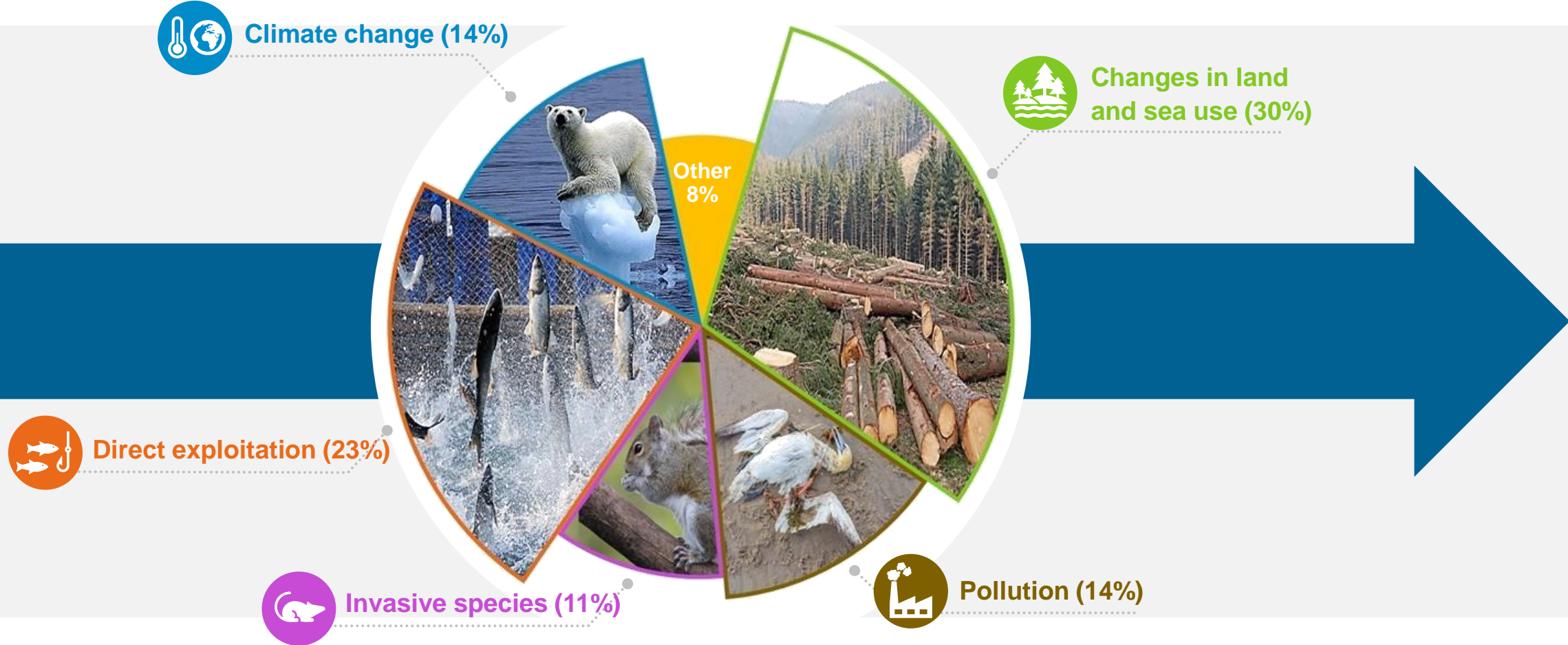
Abundance of species in Latin America and the Caribbean has fallen by 94% since 1970¹



Source: Fidelity International, 2023. 1. WWF (2022) Living Planet Report 2022 – Building a nature positive society. Almond, R.E.A., Grooten, M., Juffe Bignoli, D. & Petersen, T. (Eds). WWF, Gland, Switzerland.

Drivers of Biodiversity Loss

While biodiversity is complex, there are 5 key direct drivers



Source: Fidelity International, 2023. Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), 2019.

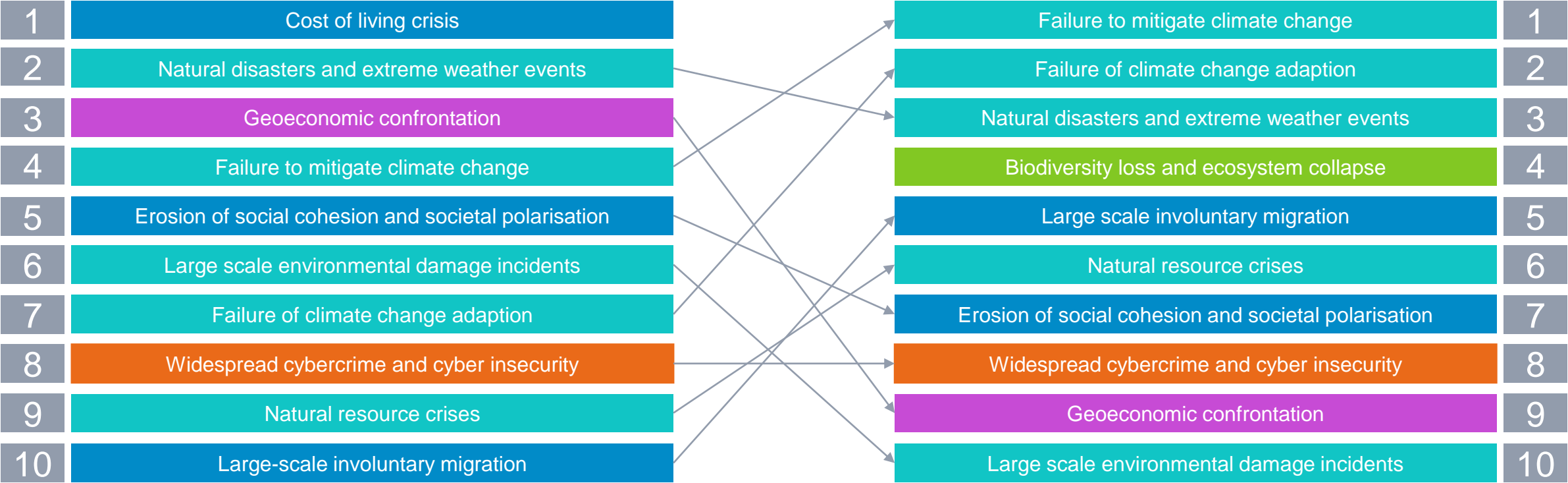
Investment megatrends

Climate change, biodiversity and social risks are transforming the economy and society

Global risks ranked by severity over the short and long term

2 years

10 years



Risk categories: Environmental (teal), Geo-political (purple), Societal (blue), Technological (orange), Biodiversity (green)

Source: Fidelity International, July 2023. Adapted from World Economic Forum Global Risks Perception Survey 2022-2023.

Biodiversity is an investable theme with magnitude



Scale of investment required

- Funding shortfall of **\$700bn funding gap to address biodiversity loss¹**, and **\$117 trillion** needed to address climate change²
- This means there will be **significant investments opportunities** but also firms face **risks to their existing business models** if this funding requirement is not met.

Policymakers increasingly focused on biodiversity

- Governments now understand the **scale and urgency** of the problem
 - COP 15, Global Biodiversity Framework
 - UN Water Conference
 - EU – Biodiversity strategy for 2030
 - EU Commission's Deforestation-Free Products Regulation (2023/24)
 - UN Strategic Plan for Forests (2017-2030)
 - COP 26 Deforestation Commitment

Source: Fidelity International, 2023. ¹World Economic Forum News [Link](#), 28 May 2021. ²Goldman Sachs Carbonomics, 10 November 21. This analysis is based on Goldman's \$4.0tn p.a. decarbonisation cost. The time period for the assessment is 10-Nov-21 (the report's publishing date) until the 31-Dec-50, which results in the \$117tn total cost. Note that \$4.0tn p.a. is the total annual cost based on the current cost curve (i.e., assuming the cost curve is static) and is also the cost for 75% decarbonization in terms of GHG but 100% of CO2 if combined with natural sinks (minimal cost).

Investing in biodiversity should hedge portfolios against the biodiversity specific risks that firms face



Disintermediation Risks

Many value chains will be disrupted - internal combustion vehicles, thermal power generation animal proteins, plastic etc.

Companies investing in products solving the biodiversity crisis are likely to gain market share.



Regulation Risks

Increased policy and regulatory intervention in response to nature risks will lead to rising compliance costs – need to invest in expensive plastic solutions, CO2 pricing etc.

Subsidies, resource quotas, taxes, certifications and fines.



Litigation Risks

Acceleration of biodiversity litigation which is set to get more prominent on the back of COP15

For example, in 2021, the French supermarket chain Casino was sued for its involvement in the cattle industry in Brazil and Colombia



Reputational Risks

Lack of consideration for biodiversity can result in lower brand value and loss of customer base.

Reference to specific securities should not be construed as a recommendation to buy or sell these securities and is included for the purposes of illustration only.

Source: Fidelity International, 2023. [UNEP](#), 2023.

How is this incorporated into our Fixed Income investment process at Fidelity?

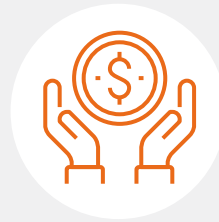
Bondholders are uniquely positioned to address these issues

Driving change with public, private and governments – best in class, targeted projects and engagement



In 2022, green bond issuance amounted to \$487.1bn¹

The green bond market is growing, and is set to grow further due to the substantial funding required



Greater breadth of issuer type

- Sovereigns & Agencies
- Public Issuers ▪ Private Issuers



1,042 engagements with 880 companies³

High frequency of bond issuance increases engagement with management



In 2022, bond issuance reached \$129.8trn compared to equity issuance at \$101.2trn²

Bond markets are larger than equity markets



Targeted capital deployment to specific assets via secured bond structures



Fixed income provides a cheaper source of financing versus equity

Source: Fidelity International, July 2023. Please note, this represents the opinion of the portfolio managers. ¹ Climate Bonds Initiative ² SIFMA ³ ESG engagements across Fixed Income in H1 2023

Incorporating biodiversity into our investment approach

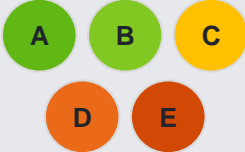
What are our aims?

1 Understand the key biodiversity risks and their potential impact on our portfolios, ensuring that issuers are working to mitigate and manage those risks

2 Invest in nature-based solutions to help mitigate and manage relevant impacts

How is this implemented

ESG Ratings




Integrate sustainability into our fundamental investment research. Biodiversity is explicitly captured in our proprietary ESG ratings framework for those sectors where our investment teams deem it material, with 78 of the 127 sub-industries mapped to at least one biodiversity indicator

Engagements



We have several ongoing thematic and collaborative biodiversity-related engagements, including around climate change, pollution, land and sea use change and direct exploitation

Collaboration



We are a member of a number of industry initiatives including the Finance for Biodiversity Pledge

Source: Fidelity International, September 2023.

Proprietary Sustainability Ratings

Analysts score a set of questions for relevant E, S and G factors

E Environmental		S Social		G Governance	
Corporate	Sovereign	Corporate	Sovereign	Corporate	Sovereign
Energy Efficiency & Water Usage	Physical Climate Risk & Natural Disasters	Human Capital & Diversity	Human Capital	Management Quality & Board Effectiveness	Governance & Corruption
GHG Emissions, Toxic Emissions & Waste	Climate Change Policy Risk	Health & Safety & Business Continuity	Social Cohesion & Inequality	Remuneration	Economic Position & Track Record
Terrestrial & Oceanic Impact	Pollution / Biodiversity	Labor Management	Essential Infrastructure	Audit & Risk Management	Institutional Oversight & Checks / Balances
Animal Use & Other Environmental Impacts	Natural Resources	Privacy & Ethical Business Conduct	Basic Needs	Investor Rights	Quality of Growth

Issuers are given a score of 0-3 for each question. Scores are then aggregated into a final Sustainability rating

Source: Fidelity International, 2023. For illustrative purposes only. Sovereign Ratings relate to Emerging Market Sovereign Issuers

Research and engagement processes reinforce each other

Material biodiversity factors are considered in the overall process



A low score and/or high materiality weight for an indicator highlights an engagement opportunity for the analyst

Environmental Indicator	Weight	Score
How does the company manage its operational energy efficiency?	10%	2
How does the company manage the GHG emissions from its operations?	30%	2
How does the company take into account and influence the GHG emissions of its key enablers?	10%	1.5
How does the company manage the toxic emissions from its operations?	10%	1.5
How does the company manage the non-hazardous waste from its operations?	10%	1.5
How does the company manage the negative impact associated with sea use in regards to biodiversity?	20%	1.5
What is the management approach to product end of life handling to increase circularity and reduce waste?	10%	0.5
Overall Environmental Summary		1.6

Social Indicator	Weight	Score
What is the management approach towards its employees?	35%	1.5
What is the management approach towards Diversity and Inclusion of its employees?	-	1.5
How does the company mitigate business disruption from cyber risks?	10%	1
How does the company ensure operation safety?	25%	1
How does the company ensure its business continuity against natural disasters and pandemics?	10%	2
How does the company uphold the principles of ethical business conduct against behaviors such as anti-competitive practice, bribery and corruption, IP infringement, and tax evasion?	10%	2
What are the potential concerns regarding labour management of its enablers?	10%	1
Overall Social Summary		1.38

Governance Indicator	Weight	Score
Management quality score	25%	2
Controlling shareholder quality score	15%	1
Board Effectiveness	20%	1
Executive Remuneration Effectiveness	10%	1.5
Audit Quality	5%	2.5
Risk Management Strength	15%	2
Investor Rights	10%	1.5
Overall Governance Summary		1.58





Company overall Rating:



Source: Fidelity International, May 2023. For illustrative purposes only

Engagement

Nature related thematic engagements

	Nature loss			
				
Live Themes	Deforestation	Plastic Packaging	Sustainable Fashion	Sustainable Food Systems
Objectives	Encourage deforestation-free commitments, a plan to meet those commitments, supply chain traceability and appropriate disclosure	Encouraging FMCGs to embed the principles of circular economy	Champion for raw material targets, a unified definition of “sustainable” materials; promote better supplier disclosures, circular initiatives	Enable companies to deliver food security and nutrition in a way that preserves the natural world and avoids unintended social, ecological or economic consequences
Focus sectors & regions	Multiple sectors & regions	‘Fast moving’ consumer goods	Apparel and footwear, Europe & US	Multiple sectors & regions

Source: Fidelity International, 28 February 2023.

Case Studies

Case Study 1: Ecuador Debt for Nature Swap

Reference to specific securities should not be construed as a recommendation to buy or sell these securities and is included for the purposes of illustration only.

Use of Proceeds:

- Ecuador completed a debt conversion that will allow the country to allocate resources for long-term marine conservation in the Galápagos Islands to promote greater sustainability and improve the quality of life of Ecuadorians.
- Resources will be used to create the Galápagos Life Fund, which will finance conservation activities over the next 18.5 years in both the Galápagos Marine Reserve and the Reserva Marina Hermandad, an area of conservation created in the Galápagos area in 2022.



Source: Fidelity International, Bloomberg, July 2023.

Case Study 2: Bazalgette

Reference to specific securities should not be construed as a recommendation to buy or sell these securities and is included for the purposes of illustration only.

- Currently, excess sewage discharged into the River Thames due to sewer overflows have increased to an average of once a week from one to two times a year in Victorian times, severely polluting the river with sewage.

Use of Proceeds:

- The new Thames Tideway Tunnel, once constructed, can help to capture 96% of the overflow and thus reduce untreated sewage by 16 million cubic metres in a typical year. Sewage discharges will also be reduced to fewer than 4 times per year.
- The improvement in water quality will prevent fish kills and allow the river to sustain a rich, diverse array of wildlife. The River Thames is a key nursery area for millions of bass and flounder, and species higher up the food chain (birds, dolphins and seals) will also benefit from the abundance of fish.
- In addition, Tideway has committed to beneficially using 85% of its excavated spoil, and nearly 1.5 million tonnes of underground material is currently being used to create an 110-hectare wildlife habitat for bird species. This 'green transformation' is said to be the largest habitat creation scheme inside the M25.



Source: Fidelity International, Bloomberg, Google Maps, July 2023.

Appendix

Case Study 3: Orsted

Reference to specific securities should not be construed as a recommendation to buy or sell these securities and is included for the purposes of illustration only.

Use of Proceeds:

- Funding of new wind farms, with most of the use of proceeds going towards the construction of Hornsea Windfarm 1&2 in the UK and Borkum Riffgrund 2 Wind farm in Germany which provides both clean sustainable energy and where a focus has been placed on contributing to being nature positive. Borkum Riffgrund 2 has been constructed with suction bucket jacket foundations, reducing noise impacts on sensitive species. With Hornsea 1& 2 there is a focus on restoring local ecosystems.
- At the Humber Estuary, Orsted investing more than GBP 2.5 million to replenish and strengthen the local ecosystem by introducing native oysters and planting salt marsh and seagrass.
- In addition, Orsted has set the ambition to deliver a net-positive biodiversity impact from all new green energy projects commissioned from 2030 at the latest.



Source: Fidelity International, Orsted, Bloomberg, July 2023.

Case Study 4: CA 100+ Engagement with Suzano

Reference to specific securities should not be construed as a recommendation to buy or sell these securities and is included for the purposes of illustration only.



Engagement information:

- Brazil's Suzano is the world's largest pulp producer with almost 11mt of pulp capacity
- We engaged directly and collaboratively as part of Climate Action 100+ - six times since January 2020
- The recommendation was for more ambitious climate targets, following which the company has committed to setting a 'Science Based Target' and worked with the Carbon Disclosure Project to map its supply chain
- The company has also published its first ever biodiversity target: to reconnect 500,000ha of rainforest by 2030



Source: Fidelity International, 2022.

Disclaimer

This information must not be reproduced or circulated without prior permission.

Fidelity only offers information on products and services and does not provide investment advice based on individual circumstances, other than when specifically stipulated by an appropriately authorised firm, in a formal communication with the client.

Fidelity International refers to the group of companies which form the global investment management organisation that provides information on products and services in designated jurisdictions outside of North America. This communication is not directed at, and must not be acted upon by persons inside the United States and is otherwise only directed at persons residing in jurisdictions where the relevant funds are authorised for distribution or where no such authorisation is required.

Unless otherwise stated all products and services are provided by Fidelity International, and all views expressed are those of Fidelity International. Fidelity, Fidelity International, the Fidelity International logo and F symbol are registered trademarks of FIL Limited. FIL Limited assets and resources as at 31/06/2023 - data is unaudited. Research professionals include both analysts and associates.

FIPM 7531