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Biodiversity in Practis

Jeroen Bos, Global Head of Equity, AXA

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No. 1 brand in Europe committed to **Responsible Investing**



AXA IM's equity capabilities

What we manage in Biodiversity equities

Key Figures

Equity assets of

\$58bn

Managed by

68

Investment Professionals

Thematics

Robotech

Digital Economy

Technology

Longevity/Health

Biotech

FinTech

Next Generation

Metaverse

Sustainable & Impact

c.**\$500m**

in the

franchise*

Clean Economy Carbon Offset

Biodiversity

Social Progress

Human Capital

Global Sustainable

Euro/Europe Sustainable

Eurozone Impact

Global

Global Growth/Trends

Multi Factor

Enhanced Index

Capital Appreciation &

Preservation

Global Balanced

Convertibles

Regional & Country

US Growth

US Multifactor

US Enhanced Index

Eurobloc/Pan Europe

UK & other single countries

Emerging Markets

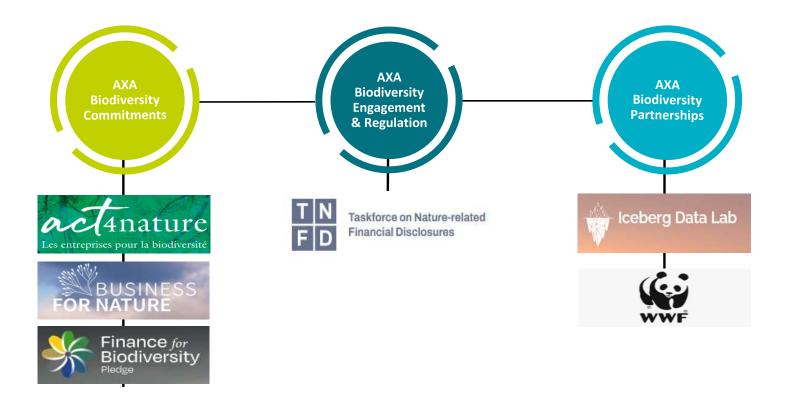
Asia/China/Japan

Source: AXA IM as at 31/12/2023. AUM data includes carve out equity portfolios. For illustrative purposes only. *Franchise represents both AXA WF ACT Biodiversity and the AXA IM ACT Biodiversity UCITS ETF.



AXA Group leading the way for biodiversity

Strong commitment to biodiversity protection and ecosystem restoration

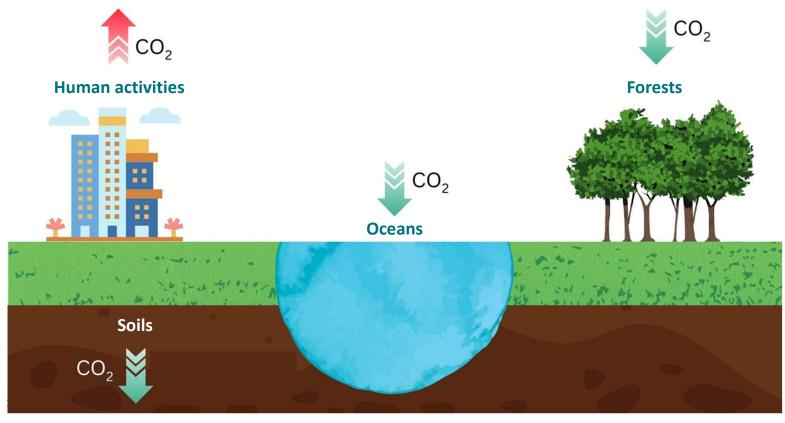


Source: AXA IM as at 31/03/2024. Logos sourced from respective company websites: act4nature; business for nature; finance for biodiversity; iceberg datalab; WWF; tnfd; cdc-biodiversite; ocean risk alliances. For illustrative purposes only.



Biodiversity is essential for limiting climate change...

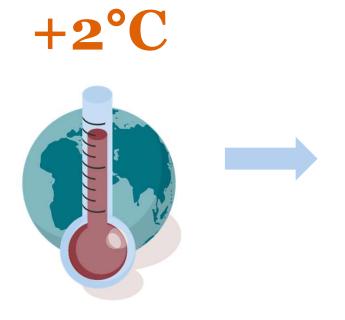
50% of GHG emissions produced by human activities are absorbed by oceans, forests and soils

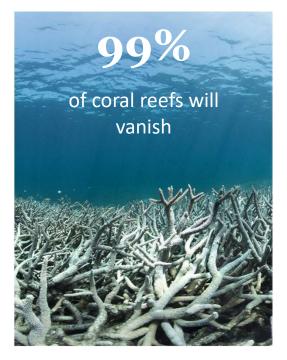




... while climate change is the second biggest driver of biodiversity loss after land use

Oceans are the biggest natural carbon sinks that can capture up to **4X** more carbon than terrestrial forests











Different ways to integrate biodiversity into investing

A variety of options exist in the market today







2. Solutions



3. Natural Capital

4. Biodiversity integration into security selection, portfolio construction & active ownership



1. Low Biodiversity Footprint Portfolio

Investing in companies that have a limited/low/below average impact on **biodiversity** through their products & services and/or operations

Biodiversity metrics

- Biodiversity metric
 - Corporate Biodiversity Footprint (CBF)
- Measurement unit
 - Km².MSA (Mean Species Abundance)
- Relative or Absolute
 - MSA vs benchmark? Or Sector-Neutral?

Key Features

- Advantages
 - Little negative impact of portfolio companies on biodiversity
 - Below avg. exposure to biodiversity risks
- Disadvantages
 - Little focus on companies in transition to a lower biodiversity-impact society
 - Limits capital flows to support transition



1. Low Biodiversity Footprint Portfolio – investment examples

Investing in companies that have a limited/low/below average impact on **biodiversity** through their products & services and/or operations







WA Managers





Source: AXA IM. Company examples are for illustrative purposes only. This does not constitute investment research or financial analysis relating to transactions in financial instruments, nor does it constitute an offer to buy or sell any investments, products or services, and should not be considered as solicitation or investment, legal or tax advice, a recommendation for an investment strategy or a personalised recommendation to buy or sell securities.

2. Solutions Portfolio: solutions to the transition to a lower biodiversity-impact society

Investing in companies that provide solutions through its products and services that support the transition to a lower biodiversity-impact society

Solution Providers

Agritech	Water Ecosystem
Food Innovation	Environmental Testing
Resource Efficiency	Software & Services
Sustainable Materials	Semiconductors
Recycling & Recirculation	Automation Equipment
Consulting & Engineering	

Key Features

Advantages

 Focus on companies that have a positive impact on the transition to a lower biodiversity impact world

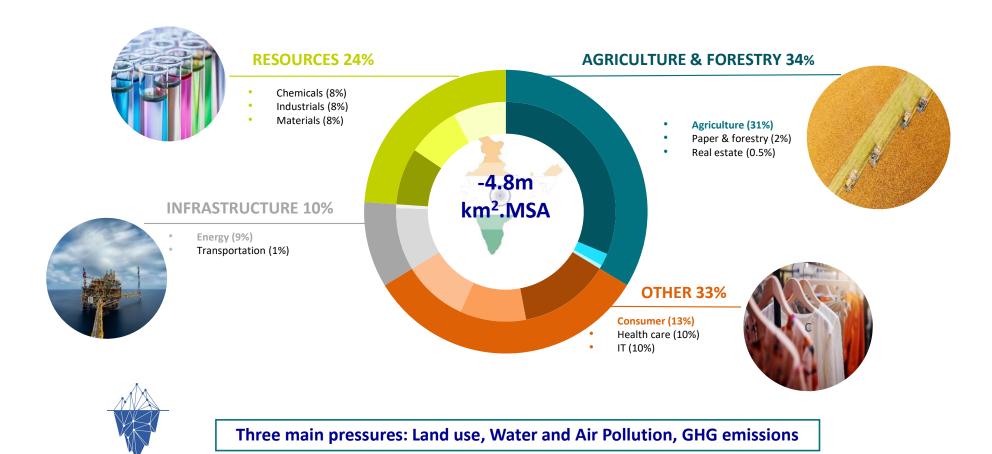
Disadvantages

- Portfolio might have higher biodiversity footprint & higher biodiversity risk
- Limited capital flows to support the transition in case of listed securities

Source: AXA IM as at 31/03/2024. For illustrative purpose only.



2. Solutions Portfolio: Focus on the transition to a lower biodiversity-impact society Corporate Biodiversity Footprint of MSCI All Country World (km²-MSA)





2. Solution Portfolio: investment examples

Investing in companies that provide solutions through its products and services that support the transition to a lower biodiversity-impact society







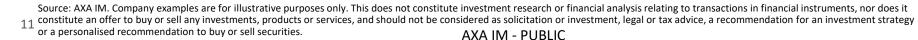








Sustainability in Action





3. Natural Capital - solutions that target habitat protection and restoration

Investing in projects and companies protecting, restoring and sustainably managing natural capital

Natural Capital Solutions



Tree planting leading to enhancements in flora and fauna biodiversity



Supporting the planting of trees on previously degraded/low-biodiversity lands



Avoiding further deforestation and habitat loss by protecting natural forest



3. Natural Capital – portfolio example: Mombak

Reforesting the Amazon

Project Overview

A vertically integrated operator focused entirely on carbon removals from tree planting.

- Buy or rent degraded pastureland in Brazil
- Plantation and regeneration to establish conservation forests
- Managed for 50 years before being legally converted to protection forests

Investment Opportunity

A strategic stake in the project operator and co-investment alongside their fund.

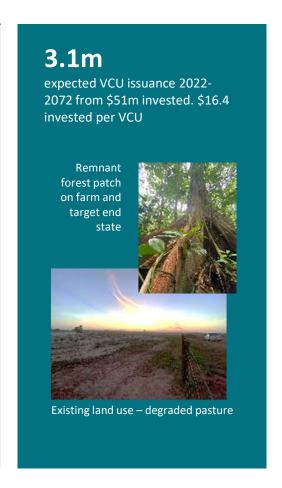
- Approximately 300,000 ha of suitable project land
- Project costs will be \$20-25m of which \$9.6m are acquisition costs
- Project will yield 1.4m VCUs over 50 years
- After 50 years each hectare restored yields 300-600 tCO₂ per ha in emissions reductions

Impact Opportunity

- 60 tree species will be used (of 291 assessed)
- Ensures significant biodiversity benefits
- And carbon sequestration impact
- Enhancements to flora and fauna biodiversity
- Reforestation with native species can also:
 - increase water quality and;
 - help in the regulation of river flows.

Deal highlights

2 0011 1110111101110	
Project Type	Removals, ARR for Conservation
Size	Strategic preferred equity stake giving access to a project finance commitment of up
	to \$49mm
Structure	Preferred equity/project finance
Project size	7,000ha from AXA investment, 14k ha total
Country	Brazil
Status	In contracting



Source: AXA IM Alts, as at 30 June 2023, For indicative purposes only. Company shown herein for illustrative purposes only as of November 2023 and may not be in the portfolio later. This information should not be considered as advice or a recommendation for an investment strategy. Target IRR shown below in chart is an objective at transaction level and is not guaranteed.

4. Biodiversity integration into security selection, portfolio construction & active ownership

Integrate **biodiversity** aspects in security selection & portfolio construction as well as active ownership

Security Selection

- **▶** Integrate Material Aspects
 - Better decision-making
- Double-Materiality increasingly key
 - Key in mapping risks & opportunities
- **▶** Challenge: quantifying Impact
 - Cash Flows, Cost of Capital, etc

Portfolio Construction

- Creating Biodiversity Tilts
 - Portfolio Footprint
 - Min / Max / Avg scores
 - Solutions exposure
- **▶** Challenge: Unwanted Tilts
 - Be aware of Style, Sector,
 Regional Tilts

Active Ownership

- Engagement
 - Stimulate better disclosure and strategic direction around biodiversity
- Voting
 - Use voting to ensure a more biodiversity-proof direction of the company (where this is material)



Making an impact as Listed Equity Investors

- ✓ Providing capital to facilitate the transition to a more sustainable future
- ✓ For listed securities, exclusionary policies or capital flows are less effective
- ✓ For listed securities, active ownership (Voting & Engagement) is a key way to make an impact
- ✓ Given size of listed companies, **impact** of successful active ownership on society **can be substantial**



Investors can and should play a key role!



To conclude



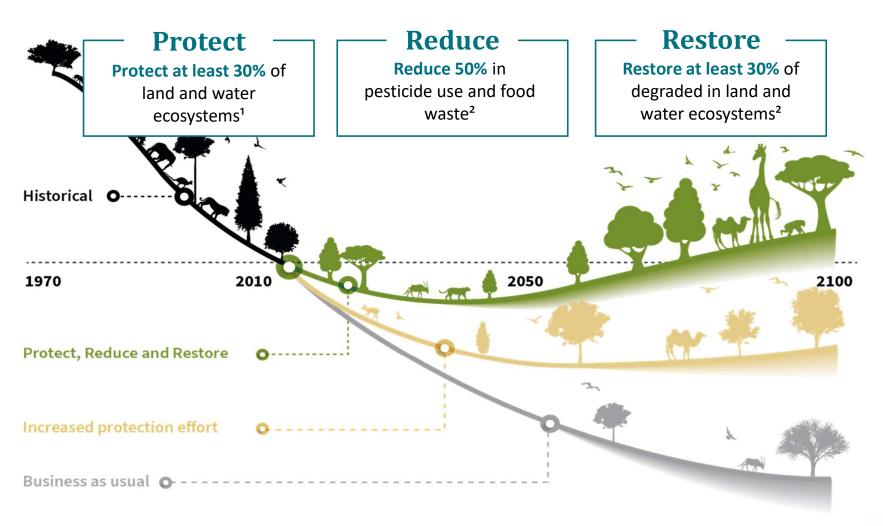


Source: AXA IM. For illustrative purposes only.





COP 15 outcome – Stop biodiversity loss by 2030 - Net positive impact on biodiversity by 2050





Impact KPIs – still a work in progress



Scope 1 + 2 Absolute Emissions in tCO₂e:

5,628 11,216

Energy Transition³

6,899

9,488

Scope 3¹
Absolute Emissions in tCO₂e:

Emissions Avoided² in tCO2e / Mcap Mns:

Energy
Transition³
Index

202

21

Biodiversity

Water reused Waste avoided

28m tonnes 16m tonnes

Water treated Water saved

244bn m³ 1bn m³

Forest area Forest area conserved certified

493k hectares 3m hectares

Social Progress

Health insurance Safety systems provided in cars

Online health Education consultations provided

Patients treated Micro loans benefitted

Mobile communication towers in Africa

Tenants

Source: AXA IM Impact Report 2022. Energy Transition Source: AXA IM ESG Report as at 31/12/2023. 1: Scope 3 includes Upstream emissions only. Please refer to the ESG Report Glossary for more information. 2: Estimated by AXA IM using a proprietary methodology. Emissions avoided is a measure of carbon emissions per million US dollars of market value relative to peers. Emissions avoided differs from carbon intensity because carbon emissions are expressed relative to market value instead of revenue and it is measured relative to aggregate sector values. 3:

19 Energy Transition Strategy is represented by the AXA WF ACT Clean Economy Fund. For illustrative purposes only. Past performance is not a guide to future performance. The information provided at the date of this document and are subject to change without notice.



Agriculture is the biggest threat to biodiversity and needs to become more efficient

The sector is responsible for 80% of deforestation¹ and uses 50% of habitable land². Global food production will have to increase by 50% to meet demand in 2050³.

The **agriculture sector is a traditional sector** that needs to be modernised:

- The use of cameras, sensors, big data and AI in soil analysis and crop treatment helps to reduce the use of harmful chemicals.
- Electric and autonomous tractors are needed to displace diesel tractors and increase resource efficiency.
- Regenerative farming practises to restore biodiversity.







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