How can investors address biodiversity impact & risks?

SOLUTIONS & LIMITATIONS IN INTEGRATING BIODIVERSITY INTO INVESTMENT DECISIONS

MSCI ESG RESEARCH

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Sitra - Webinar
June 18, 2021
Agenda

- Why does biodiversity matter for investors?
- Biodiversity in MSCI’s product suite
- Case study: MSCI Nordic Countries Investible Market Index (IMI)
  - Integration
  - Values investing
  - Impact investing
- Outlook: Challenges & opportunities
Why does biodiversity matter for investors?
What is biodiversity?

“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.”

Source: United Nations Convention on Biological Diversity (CBD)

What is biodiversity loss?

The reduction of any aspect of biological diversity (i.e. diversity at the genetic, species and ecosystem levels) is lost in a particular area through death (including extinction), destruction or manual removal; it can refer to many scales, from global extinctions to population extinctions, resulting in decreased total diversity at the same scale.

Source: the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), Biodiversity loss, May 21, 2021
Why does biodiversity matter?

**Negative externalities** on society and planet

83%
population decline across vertebrate species since 1970
Source: The Biodiversity Crisis Is a Business Crisis, BCG, March 2021

**USD 5 trillion**
annual cost resulting from the decline in ecosystem functionality
Source: The Biodiversity Crisis Is a Business Crisis, BCG, March 2021

Source: MSCI ESG Research LLC, June 11, 2021
Impact vs. dependency on natural capital

Biodiversity impact drivers
- GHG emissions
- Air pollution
- Water pollution
- Soil pollution
- Waste
- Terrestrial ecosystem use
- Water use
- Disturbances
- Marine ecosystem use

Biodiversity dependency: Ecosystem services
- Climate regulation
- Raw materials
- Filtration
- Soil quality
- Erosion control
- Disease control
- Water quality
- Disruption protection
- Pollination

Natural capital
- Atmosphere
- Land
- Oceans
- Species
- Habitat
- Soil
- Minerals
- Water

Source: MSCI ESG Research, May 27, 2021, based on ENCORE (Exploring Natural Capital Opportunities, Risks and Exposure) 2021
Biodiversity loss: Risks for investors and companies

- Raw materials shortage/loss
- Operating disruption
- Resilience loss

- Legislative action

- Policy shifts
  - Change of market preferences
  - Voluntary standards

- Global economy impact e.g. pandemic

Source: MSCI ESG Research, June 10, 2021, based on ENCORE (Exploring Natural Capital Opportunities, Risks and Exposure) 2021
USD 44 trillion of global economic value generation moderately or highly dependent on nature

Example food industry: High impact & high dependence

**HIGH BIODIVERSITY IMPACT**

- **Deforestation**: 80% of global deforestation
- **Water**: 70% of global water withdrawal
- **GHG emissions**: >26% of global GHG emissions
- **Species loss**: Threat for +5,000 species
- **Water/soil pollution**: Largest non-point source polluter of surface/groundwater

**HIGH BIODIVERSITY DEPENDENCE**

- **Food crop types**: 75% rely on animal pollination
- **Breeds of mammals**: 1,000 breeds used for food are threatened
- **Crop yield**: Up to 50% are at risk due to soil erosion
- **Climate change**: Could reduce crop production by 23% in the 2050s
- **Fish population**: 70% is fully used, overused or in crisis
- **Crop diversity**: A third could disappear by 2050

Sources: MSCI ESG Research, IPBES, UN Food & Agriculture Organization (FAO), Haile et al. (2017), Intergovernmental Panel on Climate Change (IPCC), WWF
Why now?

**MAGNITUDE OF IMPACT INTENSIFIES**
- Forest wildfires,
- Ocean pollution,
- Species extinction,
- Reduced fish stocks

**REGULATORY MOMENTUM**
- UN Biodiversity Conference 2021
- EU Sustainable Finance, EU 2030 Biodiversity Strategy

**INVESTORS WILLING TO ACT**
- Investor coalitions:
  - Partnership Biodiversity Accounting Financials (PBAF), TCFD, CDC Biodiversité Initiative,
  - Consortium for Biodiversity Footprint, Coalition for Private Investment in Conservation

**REPORTING FRAMEWORKS**
- New accounting metrics and tools to assess biodiversity risks:
  - Task Force on Nature-related Financial Disclosures,
  - ENCORE (Exploring Natural Capital Opportunities, Risks and Exposure), Science Based Targets Network

Sources: National Interagency Fire Center (NIFC), UN Principles for Responsible Investment (PRI), MSCI ESG Research, May 2021
Biodiversity in MSCI’s product suite
ESG investment objectives: Integration

“Incorporating ESG may improve our investment results”

Our investments should reflect our clients’ values

“We want our investments to make a difference in the world”

Source: MSCI ESG Research
ESG investment objectives drive investors’ ESG data needs

MSCI ESG Research rates 8,500 companies (14,000 issuers including subsidiaries) and more than 680,000 equity and fixed income securities globally (as of October 2020)

Source: MSCI ESG Research
ESG Ratings: Key Issue in our ESG Ratings model

ENVIRONMENT PILLAR
- Climate Change
  - Carbon Emissions
  - Product Carbon Footprint
  - Financing Environmental Impact
  - Climate Change Vulnerability
- Natural Capital
  - Water Stress
  - Biodiversity & Land Use
  - Raw Materials Sourcing
- Pollution & Waste
  - Toxic Emissions & Waste
  - Packaging Material & Waste
  - Electronic Waste
- Env. Opportunities
  - Opportunities in Clean Tech
  - Opportunities in Green Building
  - Opportunities in Renewable Energy

SOCIAL PILLAR
- Human Capital
  - Labor Management
  - Human Capital Development
  - Supply Chain Labor Standards
- Product Liability
  - Product Safety & Quality
  - Consumer Financial Protection
  - Privacy & Data Security
- Stakeholder Opposition
  - Controversial Sourcing
  - Community Relations
  - Access to Health Care
- Social Opportunities
  - Access to Communication
  - Access to Finance
  - Opportunities in Nutrition & Health

GOVERNANCE PILLAR
- Corporate Governance
  - Corporate Governance
  - Corporate Behavior
  - Board
  - Pay
  - Tax Transparency
  - Ownership
  - Accounting

Key Issue: Biodiversity & Land Use/ Raw Material Sourcing
Key Issues with strong link to Biodiversity

Source: MSCI ESG Research LLC, April 2021
Key Issue assessment: Biodiversity & land use

- Percentage of operations with high/moderate/low impact in biodiversity
- Percentage of operations in areas with high/moderate/low sensitivity of biodiversity
- Biodiversity policies
- Programs to protect natural ecosystems
- Biodiversity impact assessment
- Track record of minimizing disturbances from operations
- Biodiversity controversies

Risk Exposure Score (0-10)  Risk Management Score (0-10)

Key Issue score (0-10)
Biodiversity risk exposure: Nordic countries

Source: MSCI ESG Research, Sample size; MSCI Nordic Countries IMI as of June 10, 2021, GICS industries with >2 constituents + average Biodiversity Risk Exposure score >2.0
Investment Objectives

“Incorporating ESG may improve our investment results”

Integration

Financial returns

ESG criteria

Impact

Values & Preferences

Financial Returns

Individual Objectives

Values

Financial Returns

“Our investments should reflect our clients’ values”

Impact

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Source: MSCI ESG Research
Business involvement screening: Nordic countries

- Pork retailer: 3.7% (12), 0.0% (GMO involvement)
- Tobacco retailer: 1.8% (6)
- Tobacco producer: 0.6% (2)
- Fur retailer: 0.6% (2)
- Pork producer: 0.3% (1)

Source: MSCI ESG Research, Sample size: MSCI Nordic Countries IMI as of June 10, 2021, n=326
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Source: MSCI ESG Research
Sustainable development goals alignment

MSCI assesses companies’ overall alignment with each of the 17 UN SDGs

SDG 14: Life below Water
Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Product examples:
- Environmental Remediation
- Wastewater Treatment

SDG 15: Life on Land
Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Products examples:
- Environmental Remediation

Source: MSCI ESG Research, Sample size: MSCI Nordic Countries IMI as of June 10, 2021, n=326
Challenges and opportunities
Challenges

Measuring biodiversity
- How to measure biodiversity impacts given variety of impact drivers and complexities/interdependencies in ecosystems?
- Which metrics is the best proxy?

Data limitations
- Lack of corporate disclosure
- Asset locations
- Point-location data might not represent the real biodiversity impact
- Opacity and complexity of soft commodity/consumer supply chain

The aggregation challenge
- at company-level
- at portfolio-level

Source: MSCI ESG Research as of April 23, 2019
Source: MSCI ESG Research as of June 10, 2021
Opportunities

MSCI plans to focus on metrics development, partnerships, alternative datasets

- Leveraging asset location database and geospatial analysis
- Development of SFDR-related biodiversity metrics
- Reviewing external biodiversity footprinting approaches (e.g., STAR, BFFI, ENCORE, etc.)
- Exploring metrics: Measuring biodiversity loss
- Exploring companies’ revenues reliance on commodity and supply chain mapping
- Participation in external stakeholder groups

Source: MSCI ESG Research as of June 10, 2021
Thematic research on biodiversity

EXAMPLES
ESG Trends to Watch report 2021: Biodiversity crisis among top five trends

2021 ESG Trends to Watch
To Bee or not to Bee:
Investors Tackle the Biodiversity Crisis

Linda-Eling Lee
Meggin Thwing Eastman
Arne Klug

Unpacking the soy value chain:
How different countries, traders and consumers are exposed to deforestation

Right circle: company contribution in % of total revenues (FY2019) reliant on soy* from MSCI ACWI Index food products constituents, as of November 24, 2020. Source: MSCI ESG Research. Food processors typically do not disclose their level of reliance on soy, especially when it is embedded in their supply chain and not directly sourced by them. We made soy reliance estimates based on companies’ publicly available operating segments description and commonly known food products derived from soy. Therefore, we cannot guarantee the accuracy or completeness of the data or information provided.

Source: MSCI ESG Research LLC, April 2021

To see the interactive chart, please go to msci.com/esg-trends
Palm oil: Deforestation targets

Deforestation targets for top 50 palm oil buyers

Source: company disclosure of the top 50 buyers, MSCI ESG Research LLC as of Mar 23, 2020
Over 20% of global mines owned by MSCI ACWI Investable Market Index (IMI) constituents located in regions identified as **biodiversity hotspots** (areas with rich but threatened ecosystems).

A further **13% of mines were in areas with highly intact ecosystems.**
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