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Introduction to Nature with the Green Finance Institute

27th March 2025

Agenda

- Introduction to FDF’s Ambition 2030
- The Nature pillar & activities over 2025
- Overview of TNFD
- Guidance for FDM
- Getting started!
- Any questions!

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PILLAR 1:

Net Zero

Ambition:
Contribute to a 50% reduction in emissions across the agrifood supply chain by 2030

PILLAR 2:

Nature Restoration

Ambition:
Build a 'Nature Positive' industry to halt and reverse nature loss by 2030

PILLAR 3:

Sustainable Commodities

Ambition:
Contribute to halting commodity-driven deforestation and conversion by 2030

PILLAR 4:

Food Waste

Ambition:
Halve per capita food waste by 2030, contributing to UN SDG 12.3 and the Courtauld 2030 commitment

PILLAR 5:

Packaging

Ambition:
Contribute to implementing a world-class packaging recycling system in the UK, reducing the environmental impact of packaging

https://www.fdf.org.uk/ambition2030

Nature Restoration

	Entry	Established	Innovative
Targets	Sustainable sourcing policies/codes of conduct. Supply chain engagement and due diligence, including asking questions about the sustainability of supply and where it is coming from. Engagement with key suppliers*	50% of fresh food being sourced from areas with sustainable water management by 2030. Sourcing from certified supply chains. Engagement with suppliers on regenerative farming practices.	Nature restoration partnership in key sourcing geography (e.g. through NGO partnerships) Piloting new nature frameworks (e.g. TNFD, SBTN) Regenerative agriculture targets (i.e. % of ingredients sourced from regen farms or ha of land farmed regeneratively)
Guidance frameworks	Principles set out by the AFI: Accountability Framework initiative	ALLIANCE FOR WATER STEWARDSHIP Regen10 LEAF LINKING ENVIRONMENT AND FARMING Integrated Farm Management A roadmap towards water security for food & drink supply 2030 food and drink SAI PLATFORM	SCIENCE BASED TARGETS NETWORK GLOBAL COMMONS ALLIANCE TNFD CDP DISCLOSURE INSIGHT ACTION WWF

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Activities over 2025

- PA and stakeholder webinars
- 18th June risk workshop for members
- June ESC at the Allerton Project?
- Nature Handbook (Q3/Q4 launch)
- Member site visits (Q3 onwards)
- Cambridge University research

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TNFD 101: Introduction to the TNFD for food and drink manufacturing

March 2025

Taskforce on Nature-related Financial Disclosures

tnfd.global

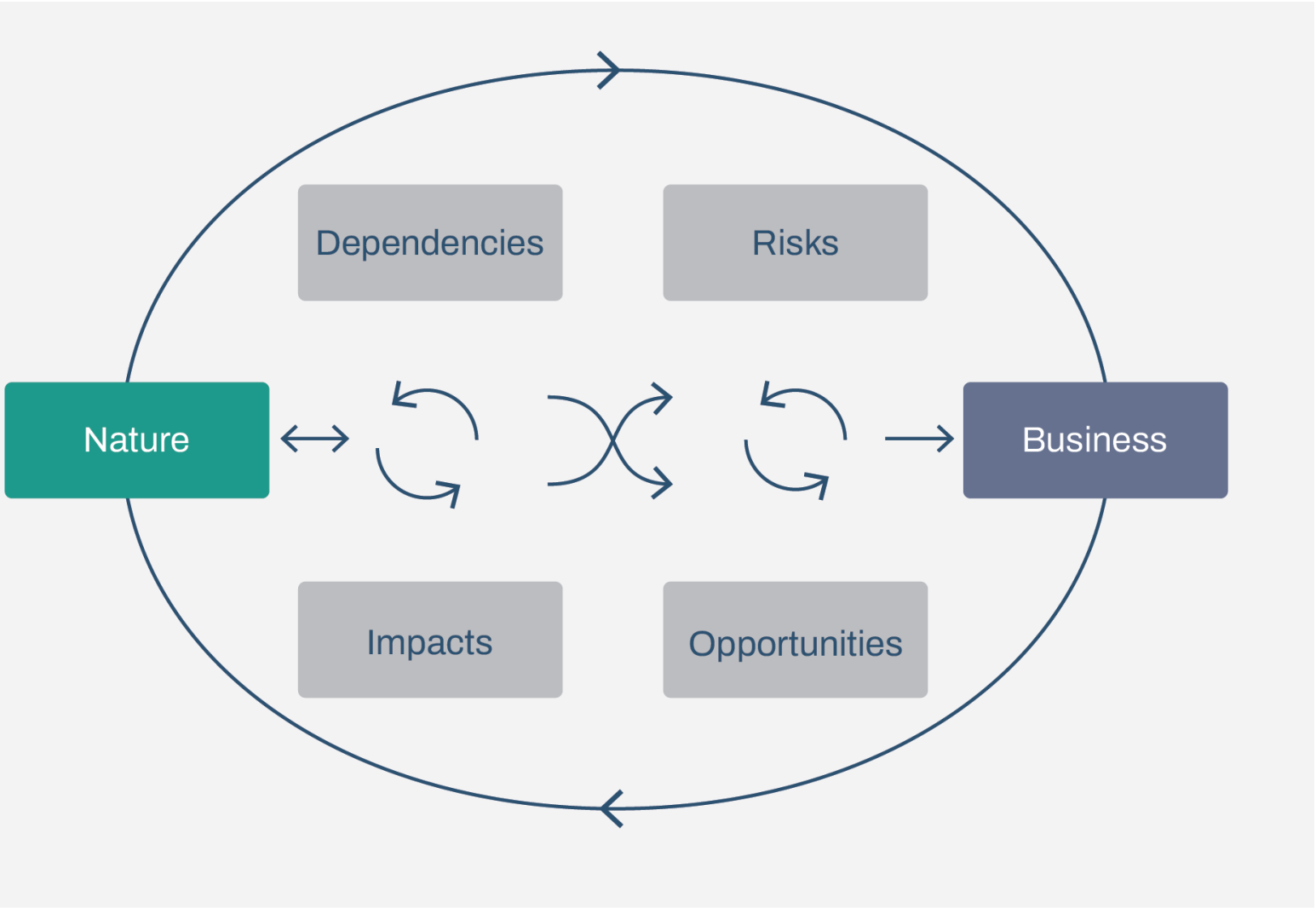
Agenda

- Overview of TNFD
- What guidance is there for food and beverage manufacturers?
- How are food and beverage manufacturers getting started?

Overview of TNFD

Taskforce on Nature-related Financial Disclosures

Nature-related issues for business and finance to consider



Dependencies: Aspects of environmental assets and ecosystem services that a person or an organisation relies on to function.

Impacts: Changes in the state of nature (quality or quantity), which may result in changes to the capacity of nature to provide social and economic functions.

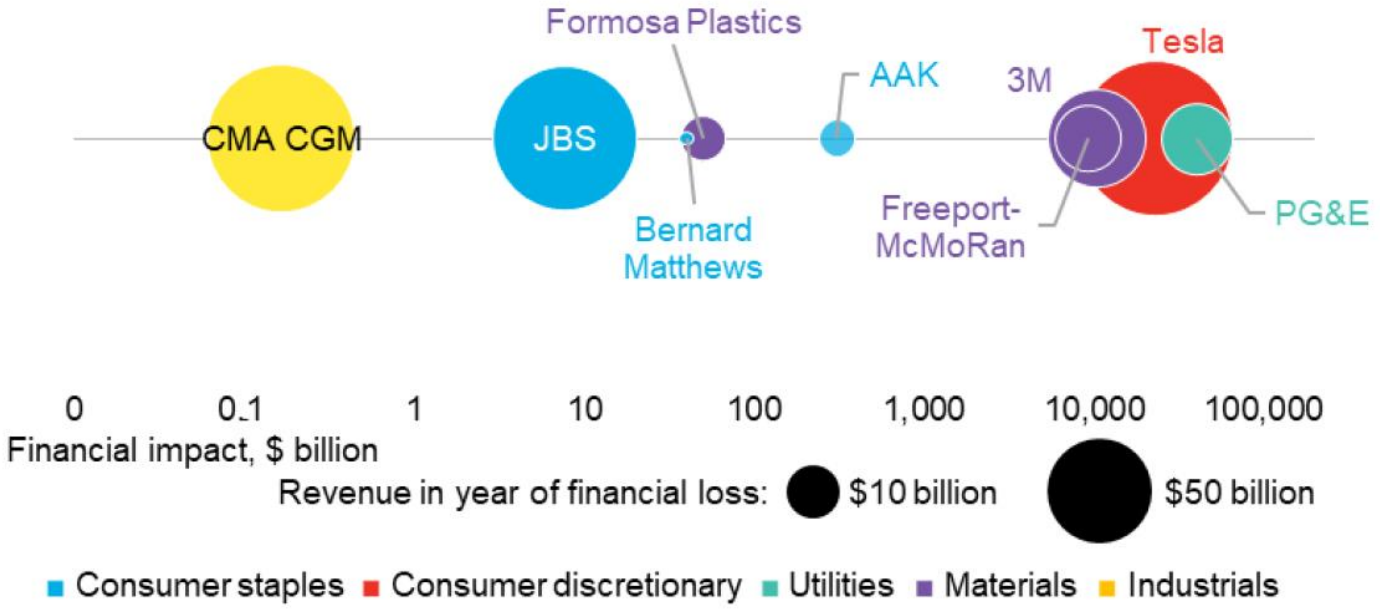
Risks: Potential threats (effects of uncertainty) posed to an organisation that arise from its and wider society's dependencies and impacts on nature.

Opportunities: Activities that create positive outcomes for organisations and nature by creating positive impacts on nature or mitigating negative impacts on nature.

The financial costs of nature-related risks are mounting

$83.2 billion - Total financial impact on the 10 firms profiled in Bloomberg NEF case studies, including examples of:

- 90% fall in market cap
- Chapter 11 bankruptcy
- Credit rating downgrades
- Multi-billion dollar litigation settlements
- Major reputational damage (loss of consumer loyalty)



Bloomberg NEF, When the Bee Stings (Dec 2023)

Why now? Investors are demanding more information

"Nowhere to hide from nature risk"

"As a long-term financial investor, we may be exposed to portfolio risks and lost investment opportunities as biodiversity and ecosystems becomes degraded. The fund holds a diversified portfolio across industries and markets, and over time externalities from unsustainable use of natural ecosystems may affect its long-term performance.

NORGES BANK

Norges Bank Investment Management, Biodiversity and ecosystems: Expectations of companies

"...We encourage companies with a material impact and reliance on biodiversity and natural capital more globally to put in place effective mitigation strategies within relevant timelines. For these companies, insufficient improvements in terms of disclosure of biodiversity-related strategy and risk management may lead to a dissenting vote cast against the Management (including by supporting biodiversity-related shareholder resolutions) or the Board.

AXA Investment Managers

AXA Investment Managers Corporate Governance & Voting Policy, February 2024

Nature Action 100

"Accordingly, we expect all companies to begin reporting within a reasonable timeframe against the Taskforce on Nature-related Financial Disclosures (TNFD) framework due to be finalised in 2023. In preparation for reporting against the framework, companies should undertake the TNFD recommended business model assessment process, referred to as LEAP...

AVIVA

Annual letter to company chairpersons
Mark Versey, CEO Aviva Investors

spring
A PRI stewardship initiative for nature

"In our view, the final recommendations of the TNFD may prove useful to some companies as they build or improve their reporting over time. We also encourage companies to consider the disclosure metrics suggested in the TNFD final recommendations where possible and relevant to their business model or the location they operate in.

BLACKROCK

BlackRock Investment Stewardship Global Principles 2024

"Depending on the level of biodiversity incorporation we would expect and recommend the investee companies which we engage to demonstrate... Transparent disclosure - reporting regularly on biodiversity and, endorsing the Taskforce on Nature-related Financial Disclosures (TNFD).

Allianz

Allianz Global Investors Biodiversity Policy Statement 2023

Overview of the TNFD

Mission

To encourage and enable business and finance to assess, report and act on their nature-related dependencies, impacts, risks and opportunities.

To support a shift in global financial flows away from nature-negative outcomes and toward nature-positive outcomes, aligned with the Global Biodiversity Framework.

Approach

Market-led:
40 Taskforce Members & 1500+ institutional supporters in the TNFD Forum

Science-based:
20 of the world's leading scientific and standards bodies as partners

Government-supported:
G7 & G20 supported

The Taskforce

Financial Institutions

AP7, AXA, Bank of America, Bank of China, Banorte, BlackRock, BNP Paribas, FirstRand, HSBC, Macquarie, MS&AD insurance Group Holdings, Mirova, Norges Bank Investment Management (NBIM), Norinchukin Bank, Rabobank, Singapore Exchange, SwissRe, UBS

Corporates

AB InBev, Acciona, Anglo American, Bayer, Bunge, City Developments Ltd, Dow, EcoPetrol, GSK, Grieg Seafoods, Holcim, LVMH, Natura & Co, Nestle, Reckitt, Suzano, Swire Properties, Tata Steel

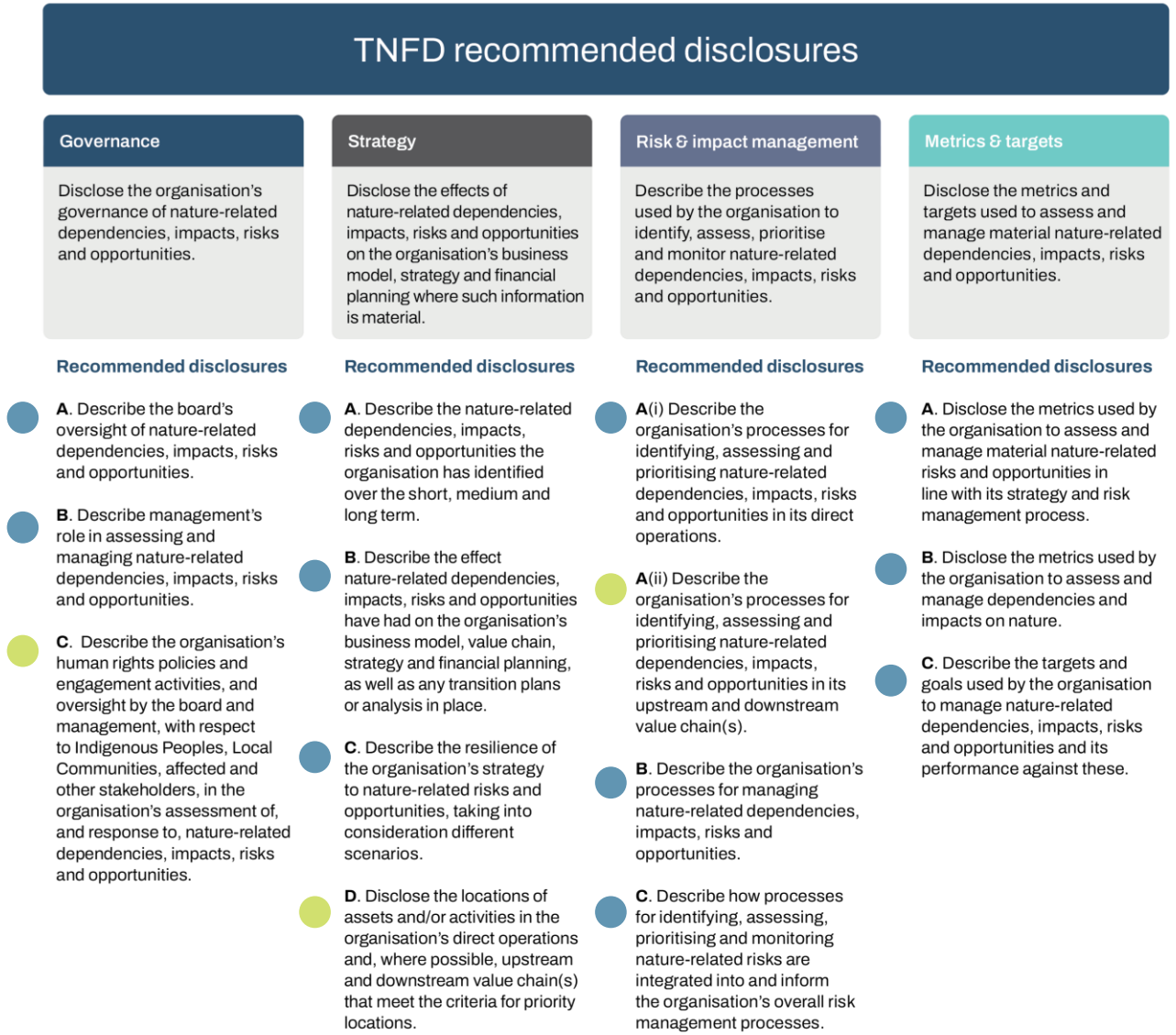
Service Providers

Deloitte, EY, KPMG, Moody's, PwC, S&P Global

14 recommended disclosures

Carried over from TCFD
Additional

- Building on **TCFD**: all 11 disclosures carried over
- Consistent with language and approach of **IFRS S1**
- Aligned with **GBF** (Target 15) goals
- 3 additional recommended disclosures:
  - Engagement with IPLCs and affected stakeholders
  - Interface with priority locations
  - Value chains



A risk assessment process – the LEAP approach

Locate
The interface with nature

L1 Span of the business model and value chain
What are our organisation's activities by sector and value chain? **Where** are our direct operations?

L2 Dependency and impact screening
Which of these sectors, value chains and direct operations are associated with potentially moderate and high dependencies and impacts on nature?

L3 Interface with nature
Where are the sectors, value chains and direct operations with potentially moderate and high dependencies and impacts located?
Which biomes and specific ecosystems do our direct operations, and moderate and high dependency and impact value chains and sectors, interface with?

L4 Interface with sensitive locations
Which of our organisation's activities in moderate and high dependency and impact value chains and sectors are located in ecologically sensitive locations?
And **which** of our direct operations are in these sensitive locations?

Evaluate
Dependencies & impacts

E1 Identification of environmental assets, ecosystem services and impact drivers
What are the sectors, business processes or activities to be analysed? What environmental assets, ecosystem services and impact drivers are associated with these sectors, business processes, activities and assessment locations?

E2 Identification of dependencies and impacts
What are our dependencies and impacts on nature?

E3 Dependency and impact measurement
What is the scale and scope of our dependencies on nature?

What is the severity of our negative impacts on nature? What is the scale and scope of our positive impacts on nature?

E4 Impact materiality assessment
Which of our impacts are material?

Assess
Risks & opportunities

A1 Risk and opportunity identification
What are the corresponding risks and opportunities for our organisation?

A2 Adjustment of existing risk mitigation and risk and opportunity management
What existing risk mitigation and risk and opportunity management processes and elements are we already applying?

How can risk and opportunity management processes and associated elements (e.g. risk taxonomy, risk inventory, risk tolerance criteria) be adapted?

A3 Risk and opportunity measurement and prioritisation
Which risks and opportunities should be prioritised?

A4 Risk and opportunity materiality assessment
Which risks and opportunities are material and therefore should be disclosed in line with the TNFD recommended disclosures?

Prepare
To respond & report

P1 Strategy and resource allocation plans
What risk management, strategy and resource allocation decisions should be made as a result of this analysis?

P2 Target setting and performance management
How will we set targets and define and measure progress?

P3 Reporting
What will we disclose in line with the TNFD recommended disclosures?

P4 Presentation
Where and how do we present our nature-related disclosures?

Engagement with Indigenous Peoples, Local Communities and affected stakeholders

Scenario analysis

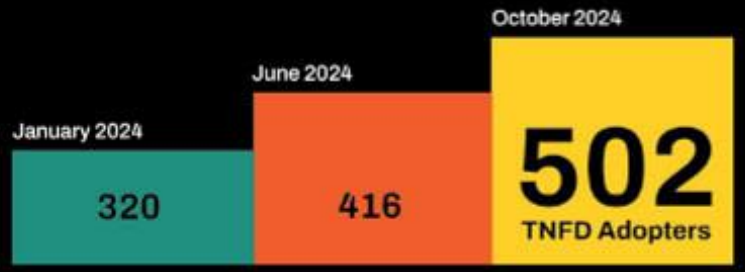
Highlights

- Designed for use by organisations of all sizes across all sectors and geographies.
- Extensive market feedback and pilot tested by over 240 institutions across sectors, geographies and biomes
- Tips on data sources used and constraints experienced, and links to TNFD Tools Catalogue

TNFD Adopters as of Oct 2024

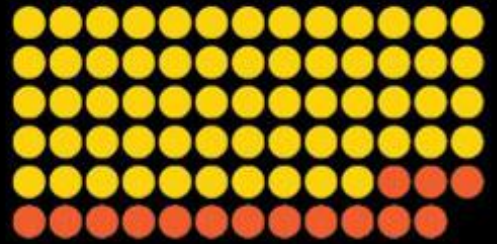
Taskforce on Nature-related Financial Disclosures

57% Increase in Adopters
since January 2024



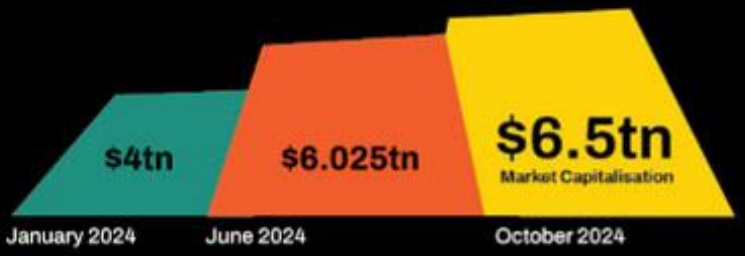
Financial year
Adopters to start reporting

62 out of 77
SASB SICS industries covered

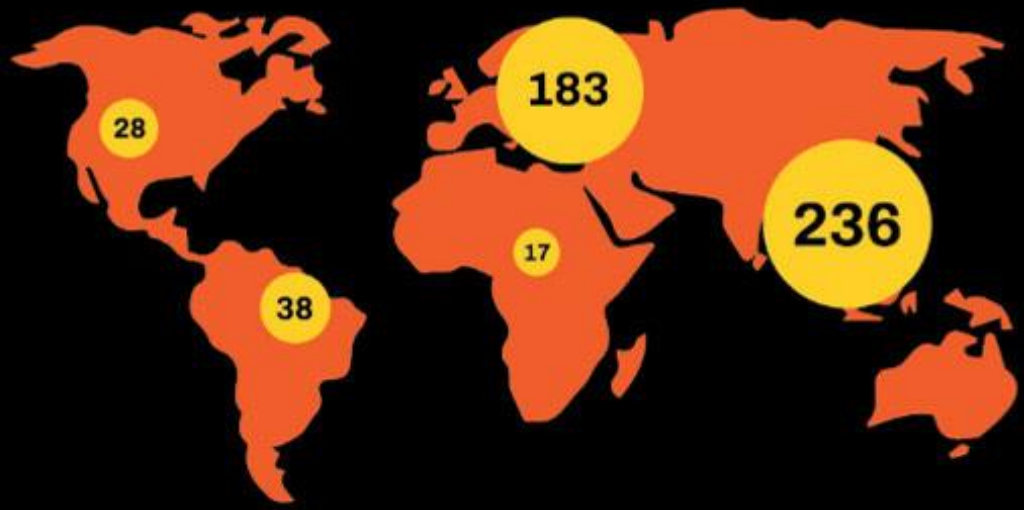


Organisation type

63.2% Market cap increase
since January 2024



Adopters by region



Regional breakdown		
	47.01%	Asia & the Pacific
	36.45%	Europe
	7.57%	Latin America & the Caribbean
	5.58%	North America
	3.39%	Africa & the Middle East

54 Adopter HQ jurisdictions

17% of Adopters located in emerging economies

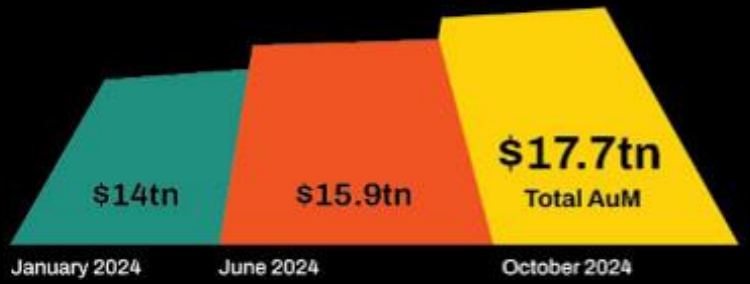
MSCI 1500

of Adopters are MSCI 1500 listed companies

G-SIBs

of the Global Systemically Important Banks (G-SIBs) are TNFD Adopters

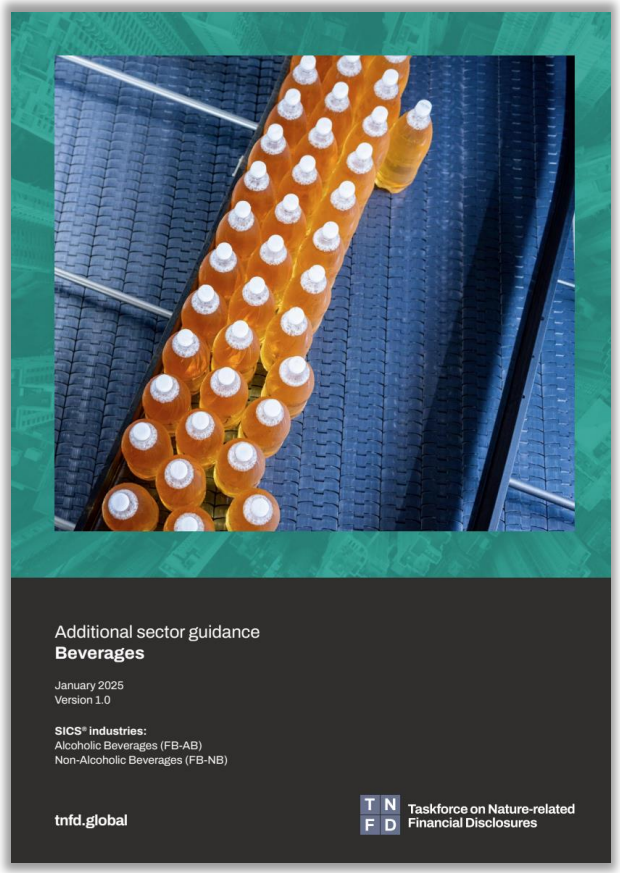
26.2% AuM increase
since January 2024



What guidance is there for food and beverage manufacturers?

Taskforce on Nature-related Financial Disclosures

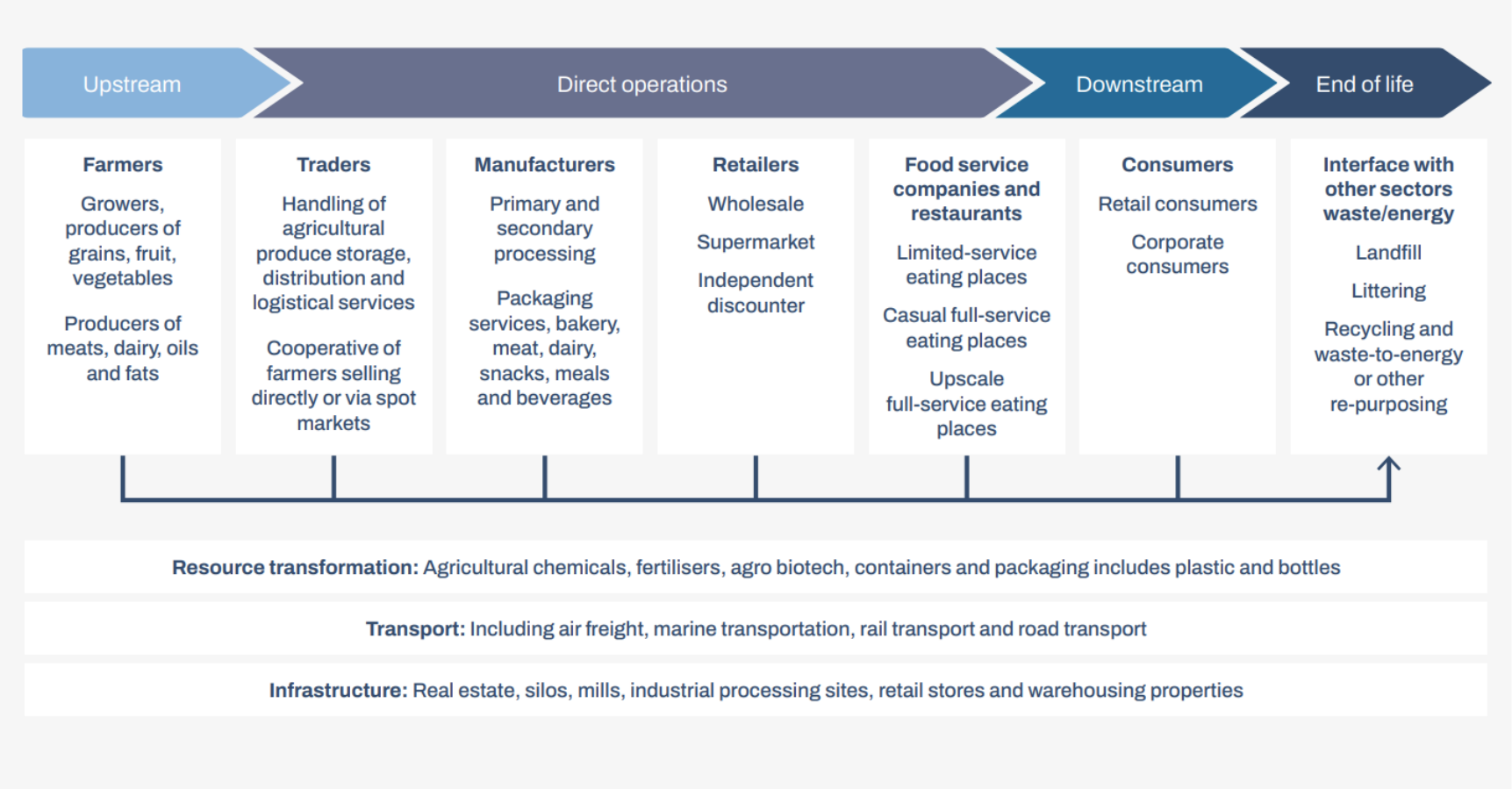
Sector-specific guidance applies the LEAP assessment and provides additional metrics



Locate: Map against the value chain

- Map your operations across **value chain components**
- Understand **where** these components take place
- Understand whether these are within **sensitive locations**

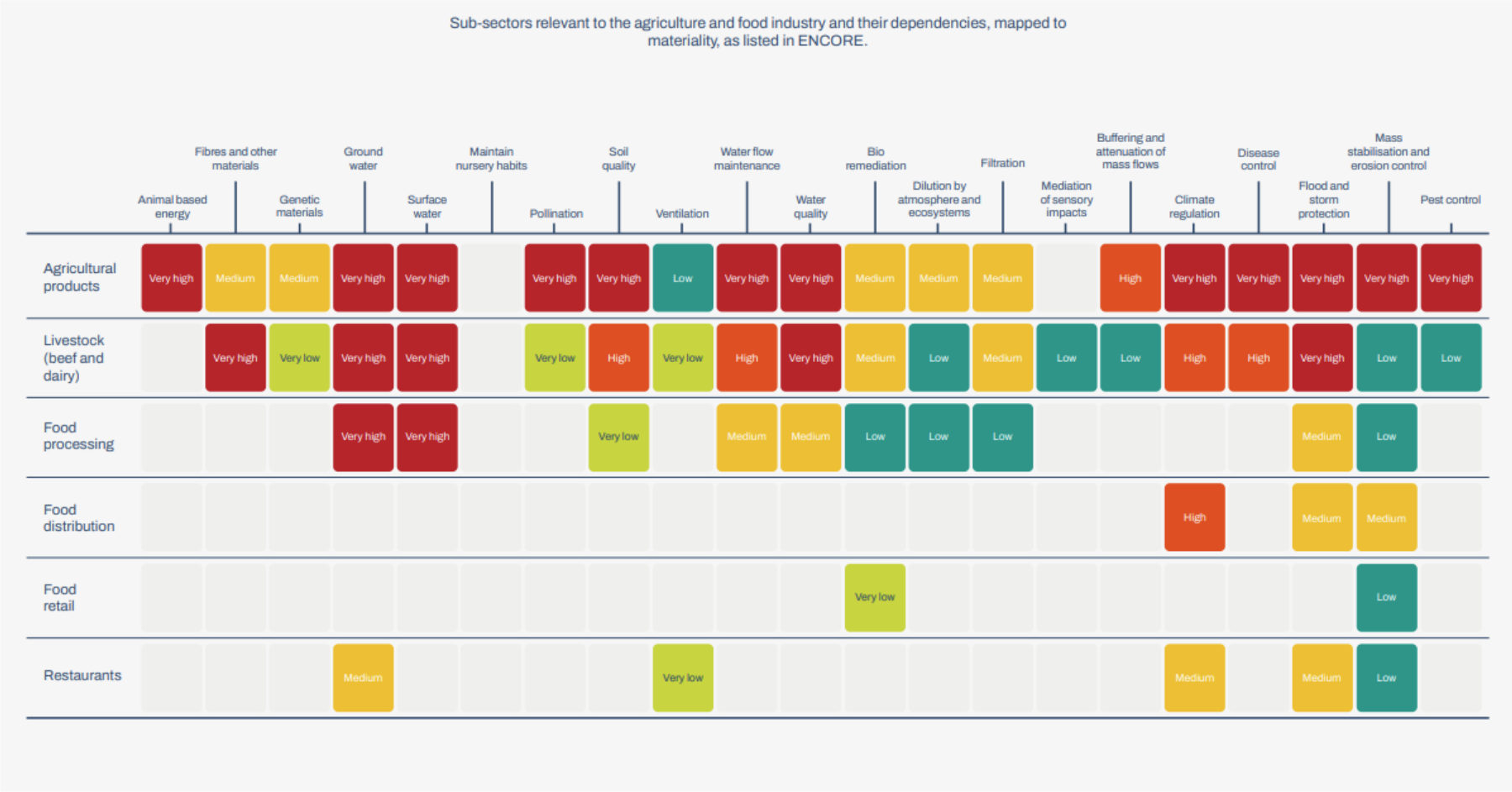
Figure 3: Illustrative food and agriculture value chain



Source: Adapted and expanded from Capitals Coalition (2023) Primer – TEEB for agriculture and food: Operational guidelines for business.

Evaluate: Identify material dependencies

Figure 4a: Materiality ratings of ecosystem services the food and agriculture sector typically depends on (based on ENCORE 2018-2023 data)



Source: 2018-2023 version of the ENCORE knowledge base.

- What are your **dependencies nature**?
- Which of those identified are **material**?
- **Key material dependencies for the sector** – ground water, surface water, water flow maintenance and water quality

Evaluate: Identify material impacts

Figure 5a: Materiality ratings for impact drivers typically relevant for the food and agriculture sector (based on 2018-2023 version of ENCORE)

Sub-sectors relevant to the agriculture and food industry and their impact drivers, mapped to materiality, as listed in SBTN sectoral materiality tool.

Direct operations data is collated from the ENCORE impacts database.

	Land and sea use change			Resource exploitation		Pollution					Climate change	Invasive species
Sub-sectors	Terrestrial ecosystem use	Freshwater ecosystem use	Marine ecosystem use	Water use	Other resource use	Soil pollutants	Water pollutants	Non GHG air pollutants	Solid waste	Disturbances	GHG emissions	Invasive alien species
	Direct operations											
Agricultural products	Very high	Very high		Very high	Low	High	High	High	Low		High	High
Livestock (beef and dairy)	Very high			Very high		Medium	Medium	High	Low		High	Medium
Food processing				High		Medium	Medium	High	High		High	
Food distribution			Medium			Low	Low	High		High	High	High
Food retail				High		High	Medium	Medium	Medium			
Restaurants									Medium			

Source: ENCORE Partners (Global Canopy, UNEP FI, and UNEP-WCMC) (Unpublished, Expected 2024). ENCORE: Exploring Natural Capital Opportunities, Risks and Exposure. Cambridge, UK: the ENCORE Partners. Available at: https://encorenature.org. *DOI:* https://doi.org/10.34892/dz3x-y059.

- What are your impacts **nature**?
- Which of those identified are **material**?
- **Key material impacts for the sector** - Water use, pollutants and solid waste.

Assess: Identify risks and opportunities

- Risks and opportunities **arise from material dependencies and impacts**
- Which risks and opportunities should be **prioritised**?

Risk and opportunity type		Examples of risks and opportunities
Physical risk	Acute	Revenue reduction due to increase in crop and livestock pests and disease.
		Increase in production and sourcing costs due to high or extremely high baseline water stress.
		Increase in capital expenditure on infrastructure repair due to damage by flooding, landslide or other natural disaster in the area of food company operations.
Transition risk	Market	Market share loss due to slow adoption of environmentally friendly plastic packaging.
		Adoption of biodiversity net gain requirements.
		Market share loss due to increasing consumer preferences for food produced via regenerative practices and/or for plant based, sustainably produced protein.
Transition risk	Reputation	Loss in revenue due to reputational damage caused by business contamination of ground water, eutrophication, plastic pollution, deforestation and/or emissions.
Opportunity	Resource efficiency	Full traceability of ingredients with high-risk exposure to embodied nature related risks reduce certification and compliance costs.
		Reduction in input costs as a result of investment into precision farming technologies.
		Increase in market valuation due to regenerative farming practices and increase in percentage of natural vegetations enhancing ecosystem services and environmental assets (e.g. soil structure increases resilience to weather-related shocks).
		Percentage reduction in input costs due to increased rate of recycling (plastics, nutrients, water etc.).

Prepare: Develop actions to manage risks and opportunities

- What **risk management, strategy** and **resource allocation** decisions should be made as a result of this analysis?

Water		
Strategy	Establish (science-based) targets to reduce your pressures on freshwater, including water quantity targets on a reduction of your water withdrawals from surface and groundwater sources, and water quality targets on reductions of nutrient loading (nitrogen and phosphorus) to freshwater systems.	SBTN freshwater quantity and quality targets (2024)
	Establish a water management plan with clear targets for reducing emissions to water of key pollutants, including NOx, SOx, pesticides and antibiotics.	TNFD
	Invest in water-efficient farming technologies and water recycling technologies.	FAO (2021)
Waste		
Strategy	Adopt policies and commitments to address food loss and waste in direct operations and the supply chain, with a target to reduce food waste by 50% and food losses by at least 25% by 2030.	Adapted GRI 13 (2022); GBF target 16; SDG 13.1; Champions 12.3
	Develop strategies to reduce the environmental impact of packaging throughout its life cycle, including commitments to eliminate unnecessary plastic packaging, transition from single use to reuse models, reduce virgin plastic usage, increase postconsumer recycled content, and ensure plastic packaging is reusable, recyclable or compostable.	Adapted from *Processed Foods* SASB Standards (2023); UNEP & Ellen MacArthur Foundation (2018); related to GBF target 16
	Invest in plastic recycling technologies and infrastructure and plastic reuse solutions.	TNFD

The TNFD framework recommends 22 metrics that could be material for food and agriculture businesses

9 Core global impact and dependency metrics

Aligned to the IPBES drivers of nature loss

Land/ freshwater/ ocean use change

- Total spatial footprint
- Extent of land/ freshwater/ ocean use change
- “conserved or restored

Pollution/ pollution removal

- Soil pollutants
- Wastewater changed
- Waste generation
- Plastic pollution
- Non-GHG air pollutants

Resource use/ replenishment

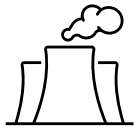
- Water withdrawal from water scarce areas
- Volume of high-risk commodities sourced

Invasive alien species and other

- Placeholder indicator: Preventative measures in place

State of nature

- Placeholder indicator: Ecosystem condition
- Placeholder indicator: Species extinction risk



Climate change

- Covered by TCFD: GHG emissions

5 Core global risk and opportunity metrics

Risk

- Value of assets vulnerable to transition risk
- Value of assets vulnerable to physical risk
- Value of nature-related penalties or litigation action

Opportunity

- Financing deployed towards nature opportunities
- Share of revenue from products and services with positive impacts on nature

3 Core sector disclosure indicators and metrics

Land/ freshwater/ocean use change

- Deforestation and conversion-free products

Resource use/replenishment

- Products from areas of water scarcity

Opportunity

- Food waste repurposed

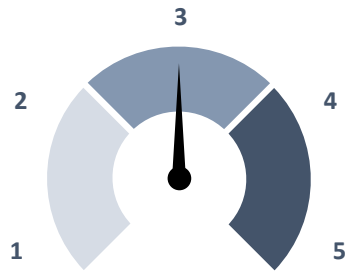
- Companies are **not expected to report against all metrics** immediately
- Companies often **start with those for which it believes there is data of sufficient quality**
- There will be many **learnings from 2025 peer reports**
- Many organisations are starting with **process-based metrics and targets**

How are food and beverage manufacturers getting started?

Taskforce on Nature-related Financial Disclosures

How are UK retail and food sector businesses getting started?

Retail, Food & Hospitality



Current maturity relative to other sectors

What would unlock further action?

- ✓ Sector alignment on **core metrics**, enabling **consistent asks from suppliers and farmers**
- ✓ Collaboration across businesses to define industry **norm for risk and impact assessment** across **global supply chains**

What are leading retail, food and hospitality businesses doing?

- Partner with local authorities and other businesses to collectively reduce impact on surrounding ecosystems
- Location specific risk assessments on high-risk product lines

What are most retail, food and hospitality businesses' first steps?

- High level materiality assessment with public tools and datasets
- Ensure structure and governance for nature work mirrors and builds out from existing climate work
- Use existing resources available through schemes such as Consumer Goods Forum and LEAF Marque

Why are retail, food and hospitality businesses considering TNFD-aligned reporting?

- Mandatory disclosure requirements on nature in the UK
- Investor pressure to disclose nature strategy
- Nature-related risk resulting in material financial risk
- Competitive pressure from peers to keep up with industry standards

TNFD: First Steps by Sector

Bunge example

- **26%** of facilities located in **sensitive areas**
- Highlights **Brazil** as a **priority area**
- Prioritising action on **water and deforestation**

The LEAP Approach stands for:

Step 1

L Locate the company's interface with nature across geographies and value chain

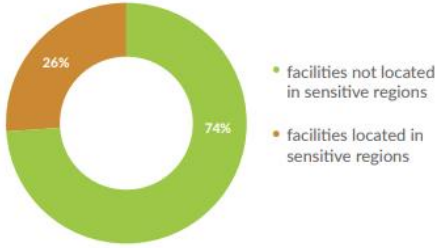
As shown in the map below, we mapped Bunge's processing facilities and defined locations where Bunge directly interfaces with nature and biodiversity-sensitive regions as per the ArcGIS Biodiversity Hotspots 2016 map.

Step 2

E Evaluate the dependencies and impacts on the nature

Having located each processing facility, we conducted a dependency analysis to evaluate the level of interface of our facilities within biodiversity sensitive regions compared to the overall company.

Facilities in Sensitive Regions for Biodiversity

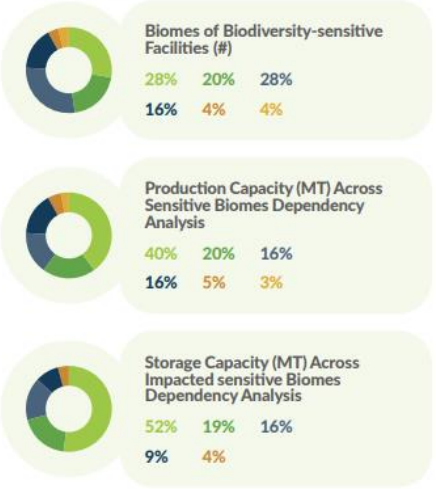


Step 3

A Assess the nature-related risks and opportunities

The analysis of our processing facilities in biodiversity-sensitive regions clearly revealed two regions, the Cerrado and Atlantic Forest, also known as Mata Atlântica. Both biomes in Brazil stand out due to their high degree of endemism and significant habitat loss.

Cerrado | Atlantic Forest | Mediterranean Basin | North American Coastal Plain | Indo-Burma | California Floristic Province



Step 4

P Prepare the response to nature-related risks and opportunities

The current guidance proposed by TNFD is based on owned and/or controlled operations. Overall, approximately 26% of our facilities and 25% of our total production are located in sensitive areas for biodiversity, while 24% of our storage capacity also impacts such regions. The biomes of Cerrado and Mata Atlântica, both in Brazil, are the most important for us for concentrating 60% of our impacts and 71% of our dependencies.

We understand that, for dealing with agricultural commodities, it is not only where we operate but where these commodities come from as relevant aspect related to biodiversity. In these terms, that is why our analysis considered our production and storage capacities, for they show impacts, dependencies, risks and opportunities that our supply shed may have on biodiversity matters.

The two key aspects related to biodiversity are water, mainly in regions of scarcity, and deforestation and land conversion from natural habitats, thus intrinsically related to biodiversity loss and dependencies. In this report, we have comprehensive disclosure of biodiversity-related matters such as climate and SBTs, water management in our operations as well as our journey fighting deforestation and ecosystem loss in our supply shed for South America, Africa and Asia.

Bunge Global Sustainability Report

Bunge example

- Aligned to a **selection** of core metrics

TNFD

Indicator	Sustainability Report 2023
Total spatial footprint (km^2) (sum of): → Total surface area controlled/ managed by the organization, where the organization has control (km^2); → Total disturbed area (km^2); and → Total rehabilitated/restored area (km^2).	26% Inside, 74% Outside Biodiversity-sensitive Regions (Dependency Analysis).
Extent of land/freshwater/ocean ecosystem use change (km^2) by: → Type of ecosystem; and → Type of business activity. Extent of land/freshwater/ocean ecosystem conserved or restored (km^2), split into: → Voluntary; and → Required by statutes or regulations. Extent of land/freshwater/ocean ecosystem that is sustainably managed (km^2) by: → Type of ecosystem; and → Type of business activity.	Total volume of water withdrawn 2023 - 86,840,746 m^3. 27 million hectares monitored through satellite and radar, page 53.
Pollutants released to soil (tons) by type, referring to sector-specific guidance on types of pollutants.	Hazardous landfill disposal 2023 - 128 metric tons.
Volume of water discharged (m^3), split into: → Total; → Freshwater; and → Other. Including: → Concentrations of key pollutants in the wastewater discharged, by type of pollutant, referring to sector-specific guidance for types of pollutants; and → Temperature of water discharged, where relevant.	Total volume of water discharged 2023 – 74,855,953 m^3. Total volume of fresh surface water discharged 2023 - 13,693,867 m^3.

Bunge Global Sustainability Report

Actions to take now

1. Sign up to the TNFD UK Consultation Group
2. Read the TNFD guidance and explore resources
3. Reach out to us to discuss how you can get started
4. Consider which of your existing day-to-day processes and actions are relevant to nature
5. Perform a high-level materiality assessment using public tools and data
6. Consider whether a further conversation on TNFD with your peer group would be of interest

Questions?

Charlie.Dixon@gfi.green
Hannah.murray@gfi.green

Taskforce on Nature-related Financial Disclosures