TNFD Proteus workshop

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10 MAY 2023

PROTEUS HORIZON SCAN WEBINARS

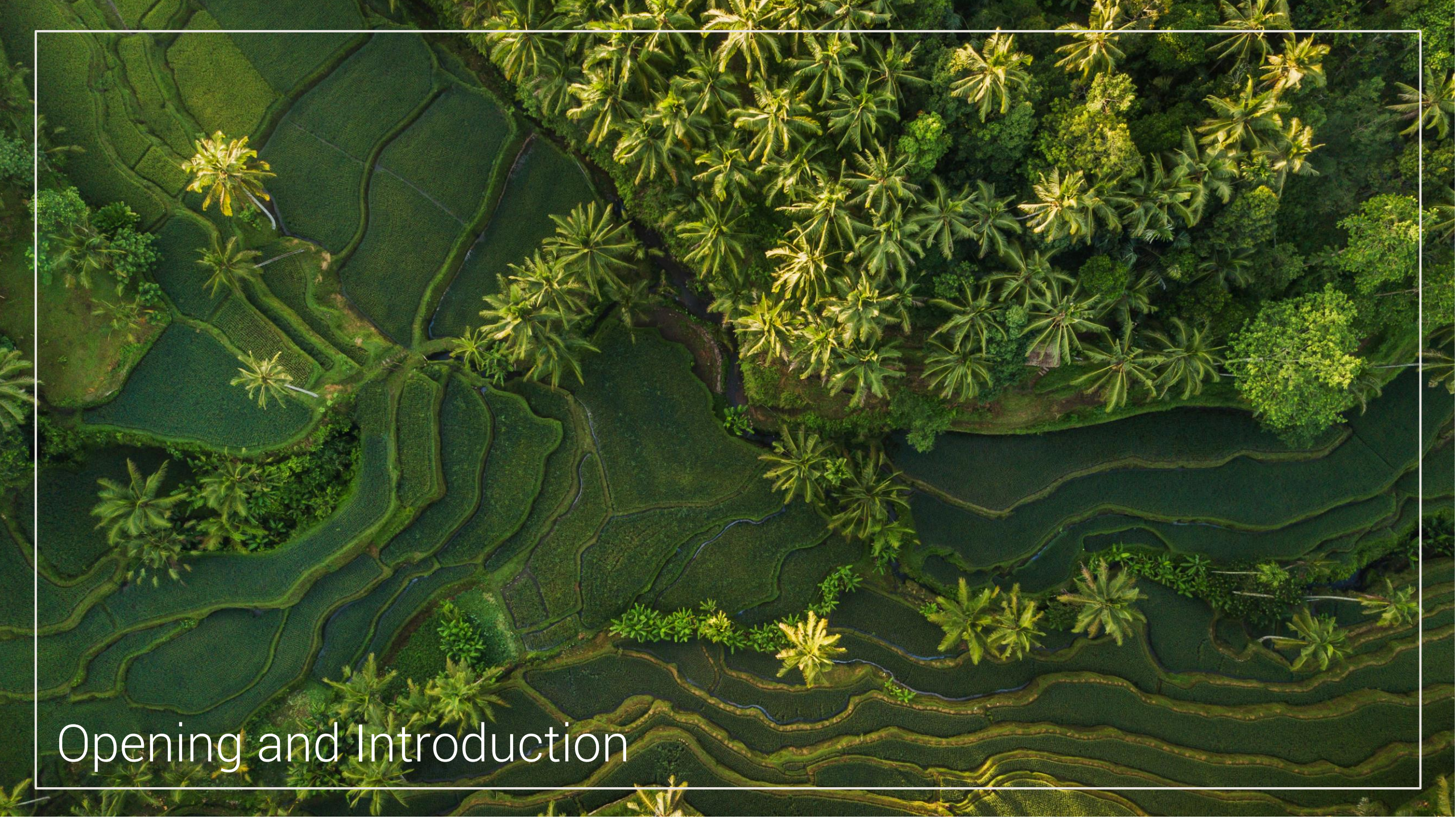
A series of webinars for Proteus Partners sharing information and insights into the latest trends and developments in biodiversity and ecosystem services policy, initiatives, data and tools.

LOGISTICS

- **Scheduling:** AM & PM sessions
- **Rules:** Chatham House rule for discussion, but presentation is recorded
- **Topics**: Your suggestions are welcome!

AGENDA

Sequence	Item	Time (Mins)
1	Opening and Introduction	10
2	Presentation: Overview of the TNFD Beta v0.4 Framework	20
3	Discussion + Interactive Quiz Using Menti.com	25
	5 Mins Break	
4	Presentation: Deep-dive into Metrics in TNFD v0.4	20
5	Breakout Group Discussions	25
6	Summary of Breakout Group Discussions	10
7	Closure and Next Steps	5



Opening and Introduction

PURPOSE OF THIS WORKSHOP

Provide the participants:

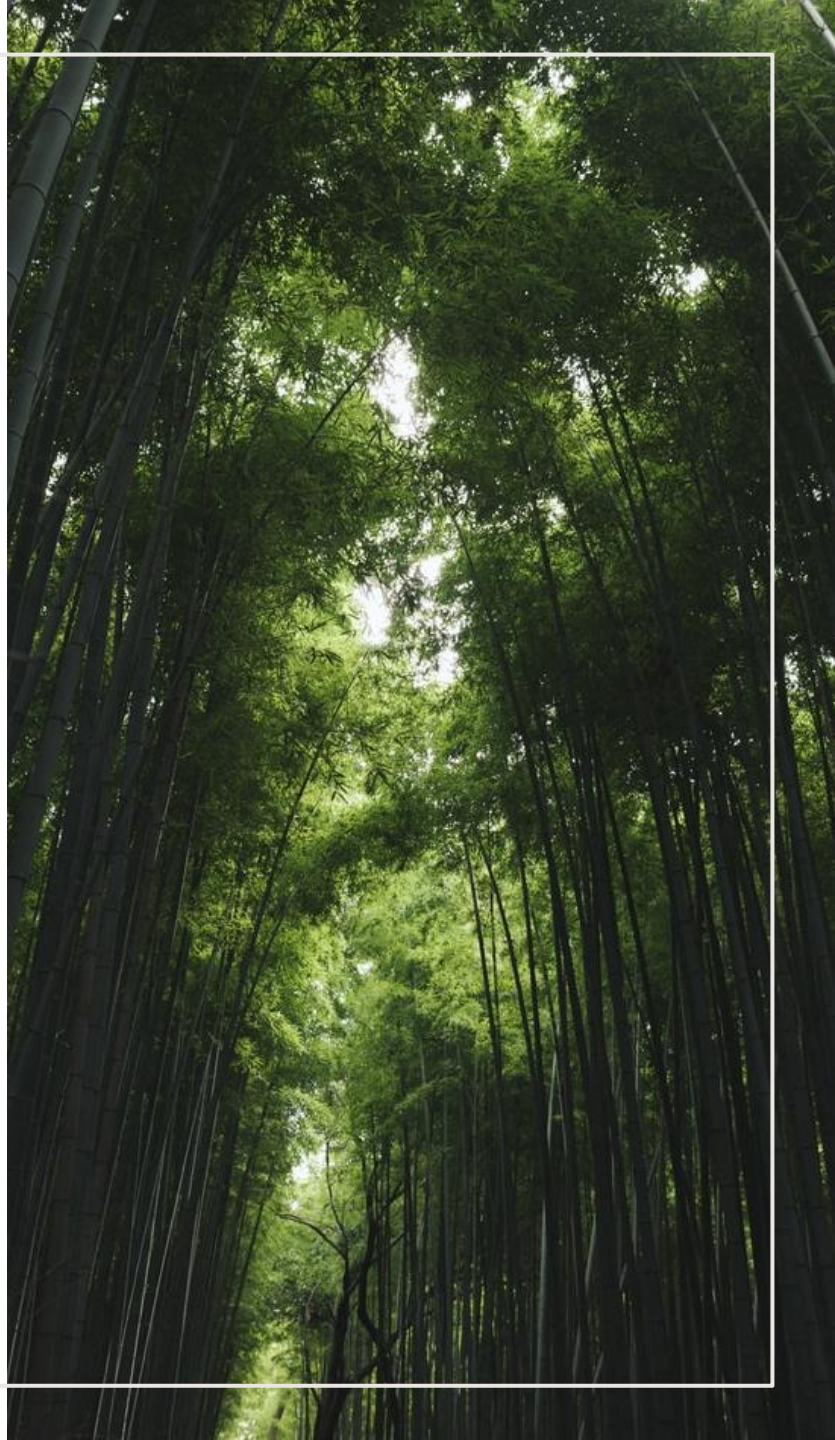
- Overview of the TNFD beta v0.4 framework
- In-depth update on metrics in TNFD v0.4

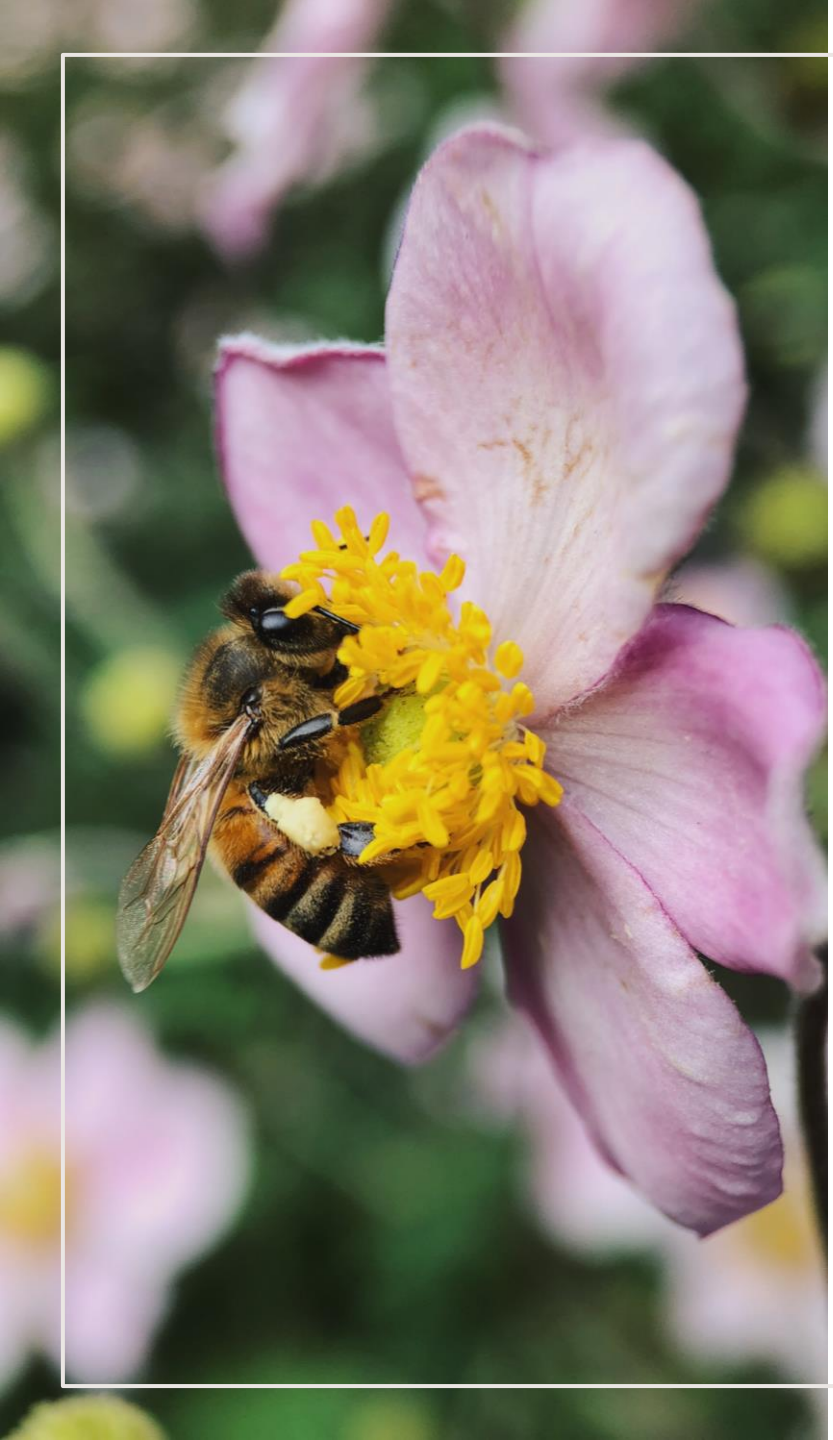
Gather:

- Initial thoughts and feedback from participants on the v0.4 updates, metrics and their implications for business

Support:

- Future development of the TNFD framework by providing TNFD a summary report from this workshop





PARTICIPANT INTRODUCTIONS

TASKFORCE ON NATURE-RELATED FINANCIAL DISCLOSURES (TNFD)

TNFD is a global, market-led initiative with the mission to develop and deliver a risk management and disclosure framework for organisations to report and act on evolving nature-related risks and opportunities.

It builds on the disclosure approach and guidance developed by the Task Force on Climate-Related Financial Disclosures (TCFD).

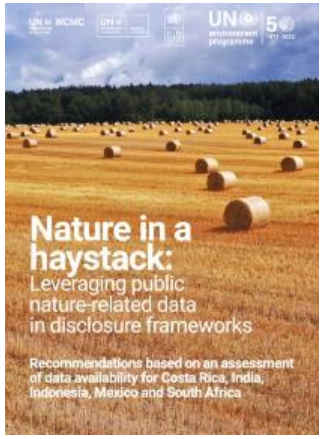
TNFD has the potential to drive change through:

- Shaping best practice in the private sector
- Informing government policy and regulation
- Informing national and international standards

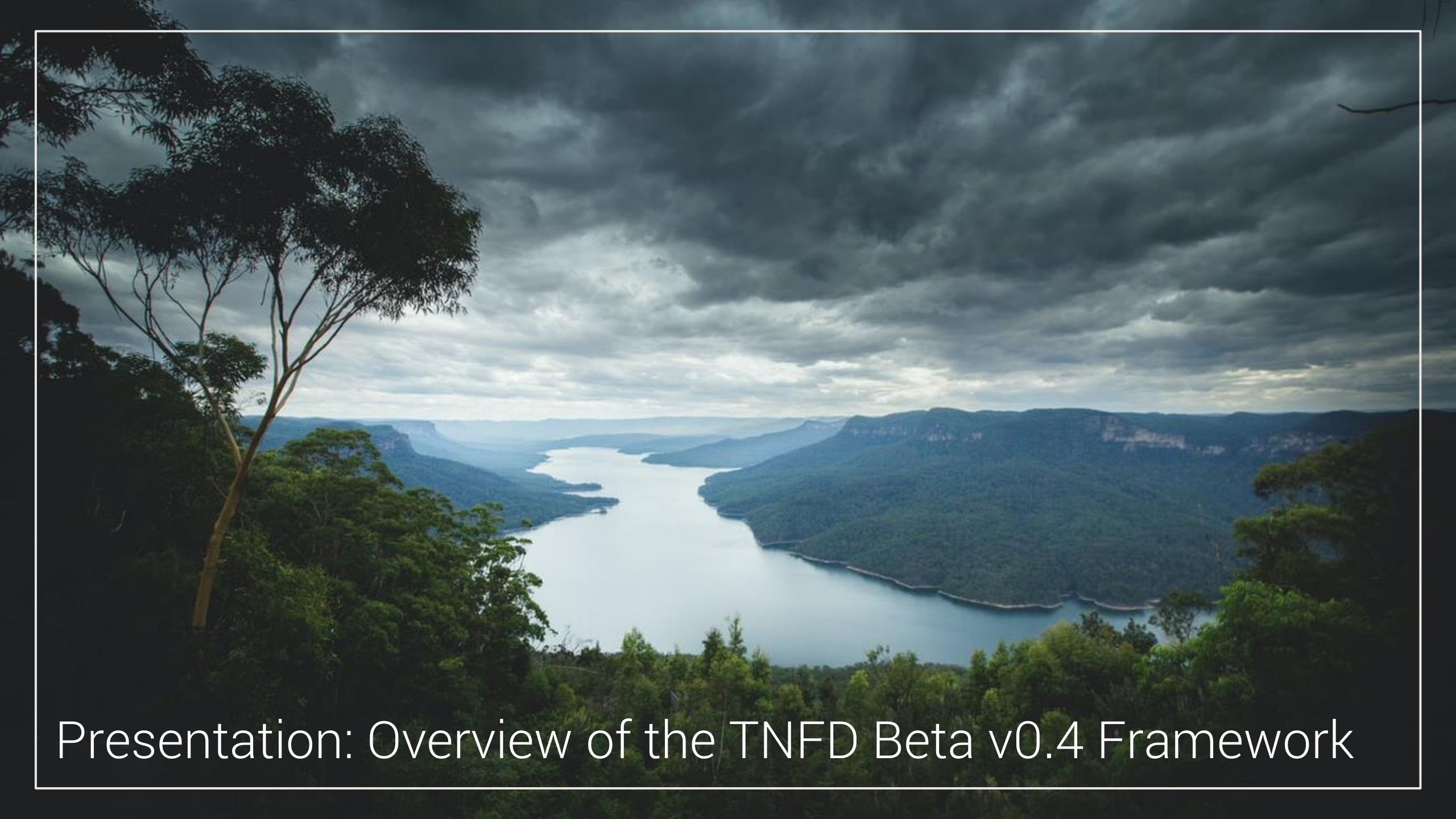
UNEP-WCMC SUPPORT TO TNFD

- One of 18 TNFD knowledge partners
- Providing technical advice to the TNFD Secretariat on contents of the framework
- Providing inputs into sector-specific guidance (e.g. mining, agriculture)
- Conducting research that informs the TNFD framework and its implementation
- Continuing development of nature tools relevant to TNFD implementation
- Participating in the TNFD Data Catalyst

TNFD related publications:



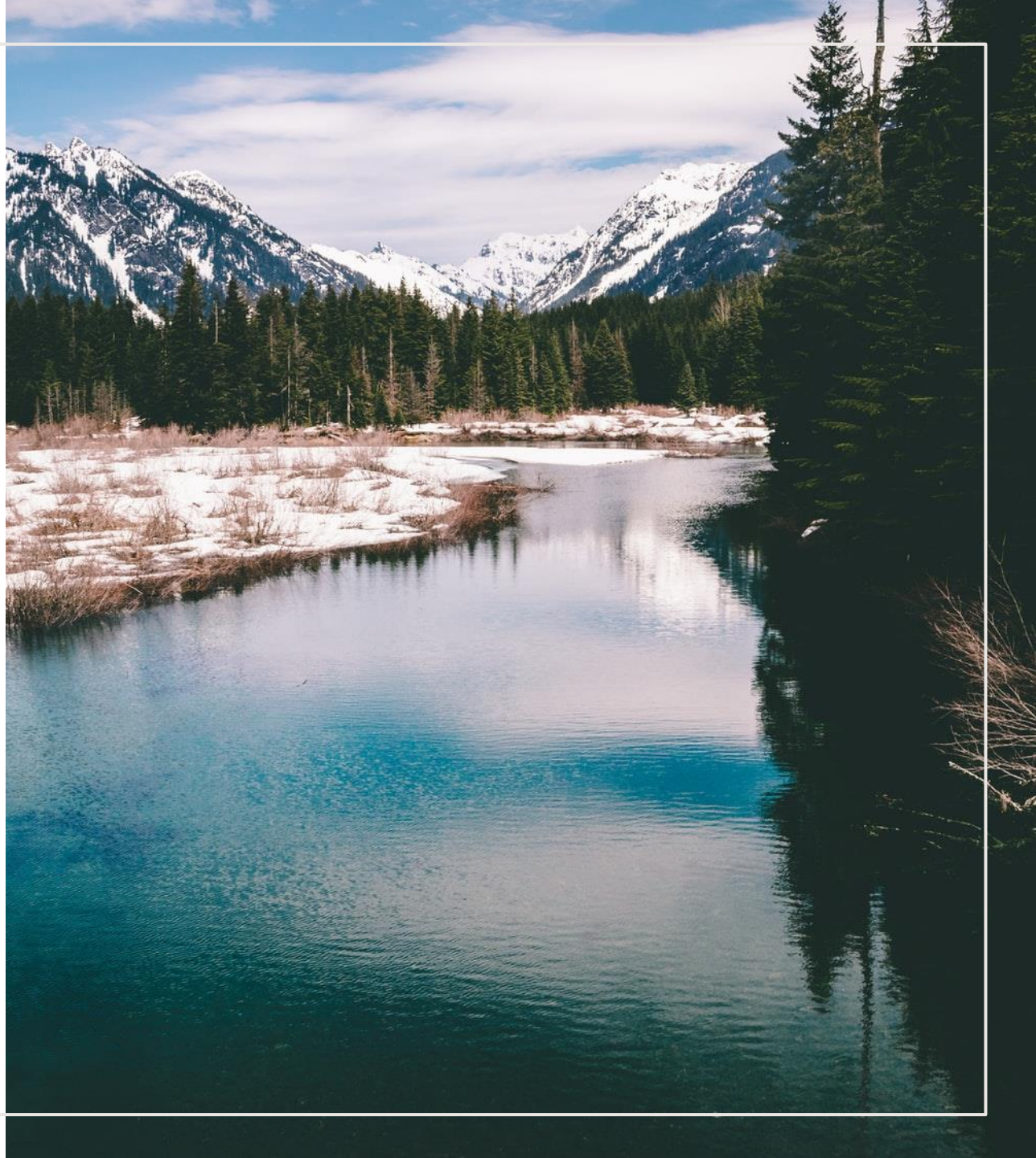
- Guidance on Measuring Dependencies (Expected May 2023)
- Report on Voluntary and Mandatory Disclosure Approaches (Currently in development)



Presentation: Overview of the TNFD Beta v0.4 Framework

OVERVIEW OF THE TNFD BETA V0.4 FRAMEWORK

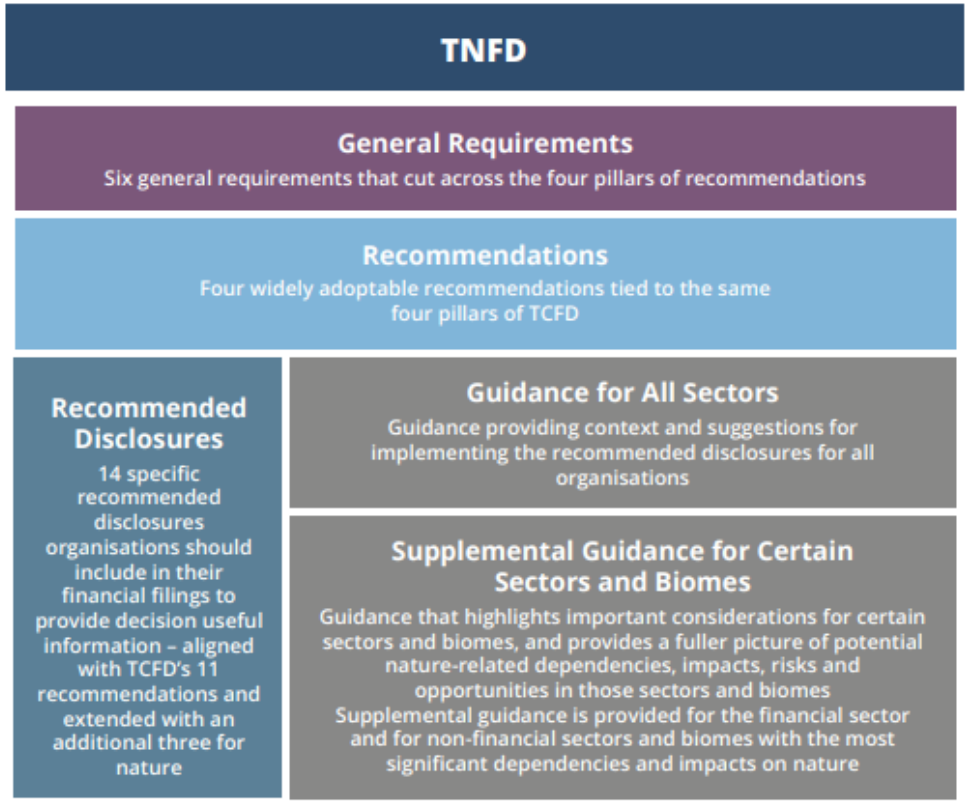
1. Disclosure Recommendations
2. Sector and Biome Specific Guidance
3. LEAP Approach
4. Scenario Analysis
5. Other Updates



DISCLOSURE RECOMMENDATIONS

TNFD's Approach to Disclosure

Figure 3: TNFD's approach to disclosure guidance, building on TCFD's approach



(Taskforce on Nature-related Financial Disclosures (TNFD) 2023)

Figure 4: TNFD's proposed six general requirements

General Requirements
1. Approach to materiality
2. Scope of disclosures
3. Links between nature-related dependencies and impacts, and risks and opportunities
4. Location
5. Integration with other sustainability issues
6. Stakeholder engagement

(Taskforce on Nature-related Financial Disclosures (TNFD) 2023)

DISCLOSURE RECOMMENDATIONS

TNFD Nature-related Disclosure Recommendations (v0.4)

Governance	Strategy	Risk & Impact Management	Metrics & Targets
Disclose the organisation's governance around nature-related dependencies, impacts, risks and opportunities.	Disclose the actual and potential impacts of nature-related dependencies, impacts, risks and opportunitiess on the organisation's businesses, strategy and financial planning where such information is material.	Disclose how the organisation identifies, assesses and manages nature-related dependencies, impacts, risks and opportunities.	Disclose the metrics and targets used to assess and manage relevant nature-related dependencies, impacts, risks and opportunities where such information is material.
Recommended Disclosures	**Recommended Disclosures**	**Recommended Disclosures**	**Recommended Disclosures**
A. Describe the board's oversight of nature-related dependencies, impacts, risks and opportunities. B. Describe management's role in assessing and managing nature-related dependencies, impacts, risks and opportunities.	A. Describe the nature-related dependencies, impacts, risks and opportunities the organisation has identified over the short, medium, and long term. B. Describe the effect nature-related risks and opportunities have had and may have on the organisation's businesses, strategy, and financial planning. C. Describe the resilience of the organisation's strategy to nature-related risks and opportunities, taking into consideration different scenarios. D. Disclose the locations where there are assets and/or activities in the organisation's direct operations, and upstream and/or downstream and/or financed where relevant, that are in priority areas.	A. (i) Describe the organisation's processes for identifying and assessing nature-related dependencies, impacts, risks and opportunities in its direct operations. A. (ii) Describe the organisation's approach to identifying nature-related dependencies, impacts, risks and opportunities in its upstream and downstream value chain(s) and financed activities and assets. B. Describe the organisation's processes for managing nature-related dependencies, impacts, risks and opportunities and actions taken in light of these processes. C. Describe how processes for identifying, assessing and managing nature-related risks are integrated into the organisation's overall risk management. D. Describe how affected stakeholders are engaged by the organisation in its assessment of, and response to, nature-related dependencies, impacts, risks and opportunities.	A. Disclose the metrics used by the organisation to assess and manage material nature-related risks and opportunities in line with its strategy and risk management process. B. Disclose the metrics used by the organisation to assess and manage dependencies and impacts on nature. C. Describe the targets and goals used by the organisation to manage nature-related dependencies, impacts, risks and opportunities and its performance against these.

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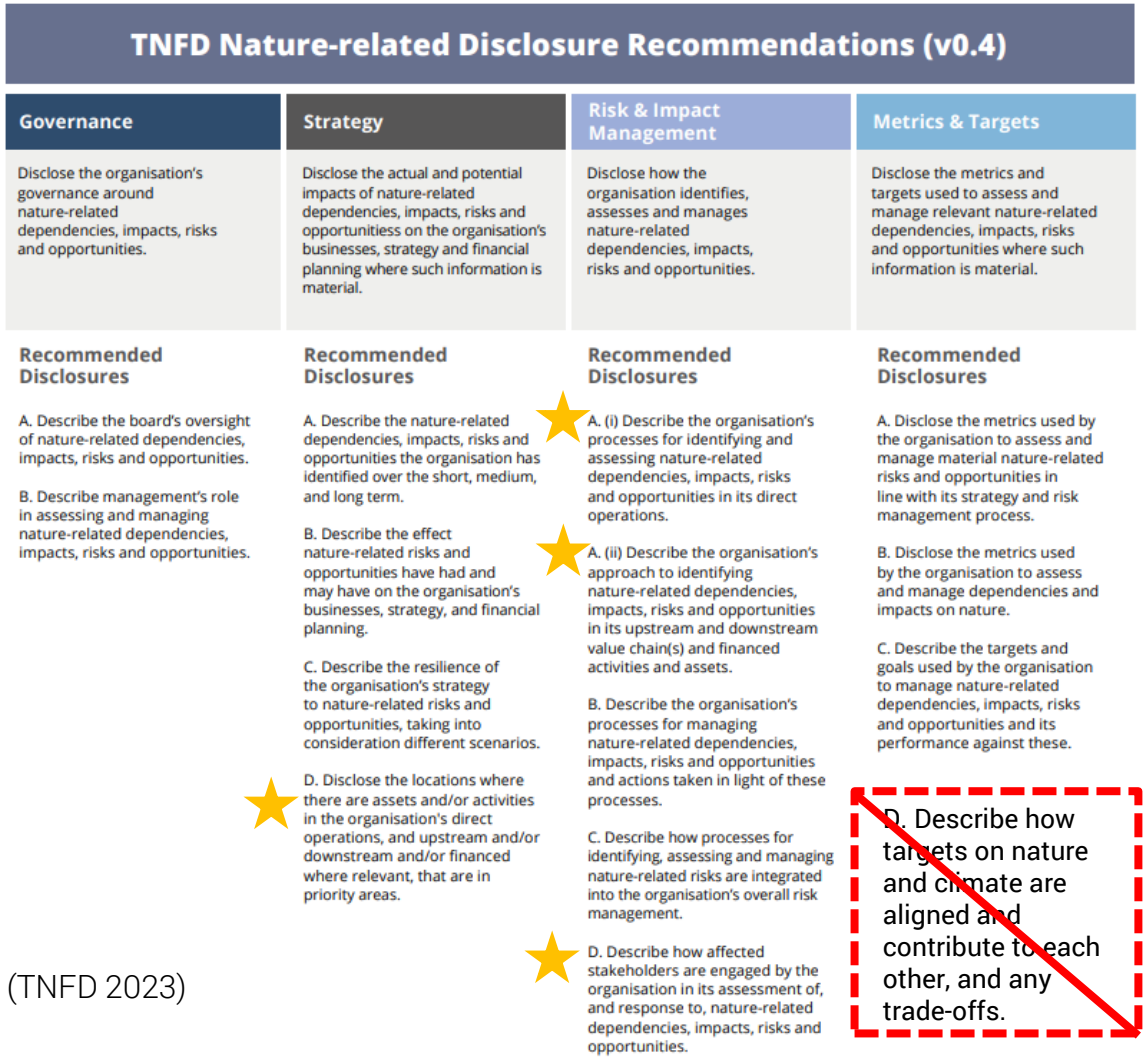
DISCLOSURE RECOMMENDATIONS

Changes since v0.3

Changes to:

- Strategy D
- Risk and Impact Management A (i) & A (ii)
- Risk and Impact Management D
- Metrics and Targets D removed as covered by General Requirement 5



TNFD Nature-related Disclosure Recommendations (v0.4)

Governance	Strategy	Risk & Impact Management	Metrics & Targets
Disclose the organisation's governance around nature-related dependencies, impacts, risks and opportunities.	Disclose the actual and potential impacts of nature-related dependencies, impacts, risks and opportunitiess on the organisation's businesses, strategy and financial planning where such information is material.	Disclose how the organisation identifies, assesses and manages nature-related dependencies, impacts, risks and opportunities.	Disclose the metrics and targets used to assess and manage relevant nature-related dependencies, impacts, risks and opportunities where such information is material.
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B. Describe management's role in assessing and managing nature-related dependencies, impacts, risks and opportunities.	B. Describe the effect nature-related risks and opportunities have had and may have on the organisation's businesses, strategy, and financial planning.	★ A. (ii) Describe the organisation's approach to identifying nature-related dependencies, impacts, risks and opportunities in its upstream and downstream value chain(s) and financed activities and assets.	B. Disclose the metrics used by the organisation to assess and manage dependencies and impacts on nature.
	C. Describe the resilience of the organisation's strategy to nature-related risks and opportunities, taking into consideration different scenarios.	B. Describe the organisation's processes for managing nature-related dependencies, impacts, risks and opportunities and actions taken in light of these processes.	C. Describe the targets and goals used by the organisation to manage nature-related dependencies, impacts, risks and opportunities and its performance against these.
	★ D. Disclose the locations where there are assets and/or activities in the organisation's direct operations, and upstream and/or downstream and/or financed where relevant, that are in priority areas.	C. Describe how processes for identifying, assessing and managing nature-related risks are integrated into the organisation's overall risk management.	~~D. Describe how targets on nature and climate are aligned and contribute to each other, and any trade-offs.~~
		★ D. Describe how affected stakeholders are engaged by the organisation in its assessment of, and response to, nature-related dependencies, impacts, risks and opportunities.	

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SECTOR AND BIOME SPECIFIC GUIDANCE

Sector Specific Guidance

Sector	Guidance released	Disclosure metrics released	Guidance in development
Financial institutions	X		
Food and agriculture	X	X	
Mining and metals	X		
Energy (oil & gas and electric utilities & power generators)	X		
Aquaculture			X
Chemicals and pharmaceuticals			X
Forestry			X
Infrastructure and real estate			X
Textiles and apparel			X

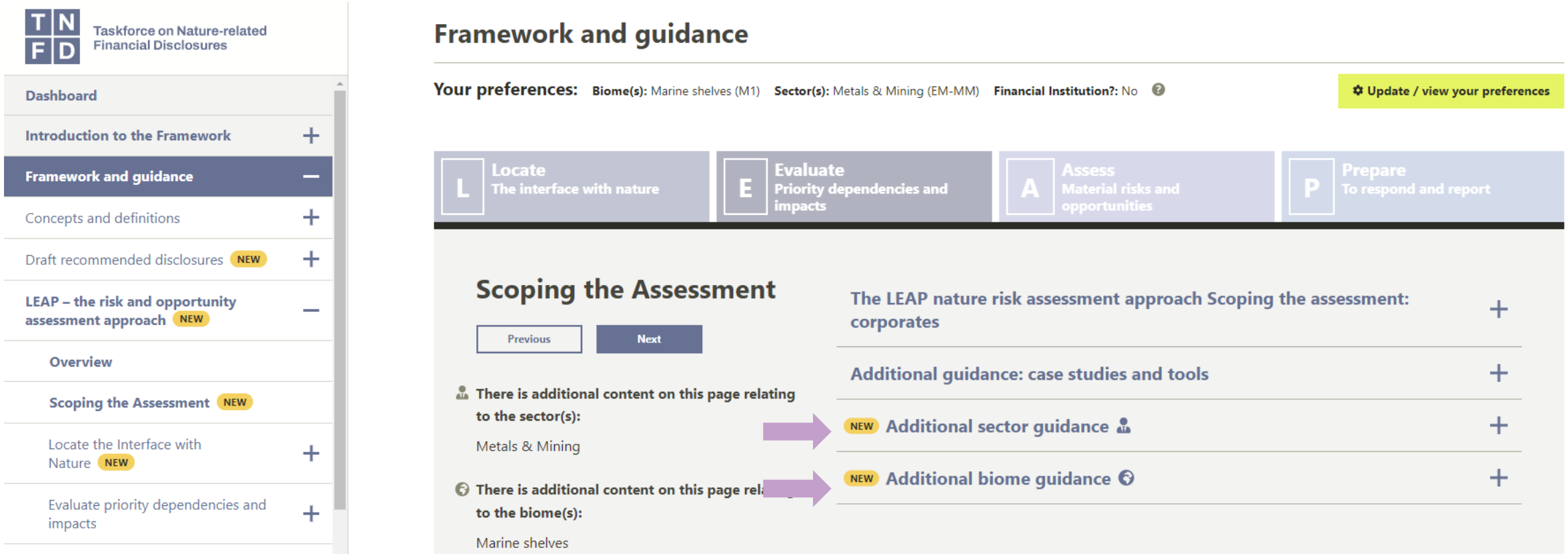
Biome Specific Guidance

Biome	Guidance released	Disclosure metrics released	Guidance in development*
Tropical forest	X	X	
River and streams	X		
Marine shelves	X		
Intensive land use systems	X		

*Other priority biomes are in development, although not specifically listed in the v0.4 framework

SECTOR AND BIOME SPECIFIC GUIDANCE

Dashboard



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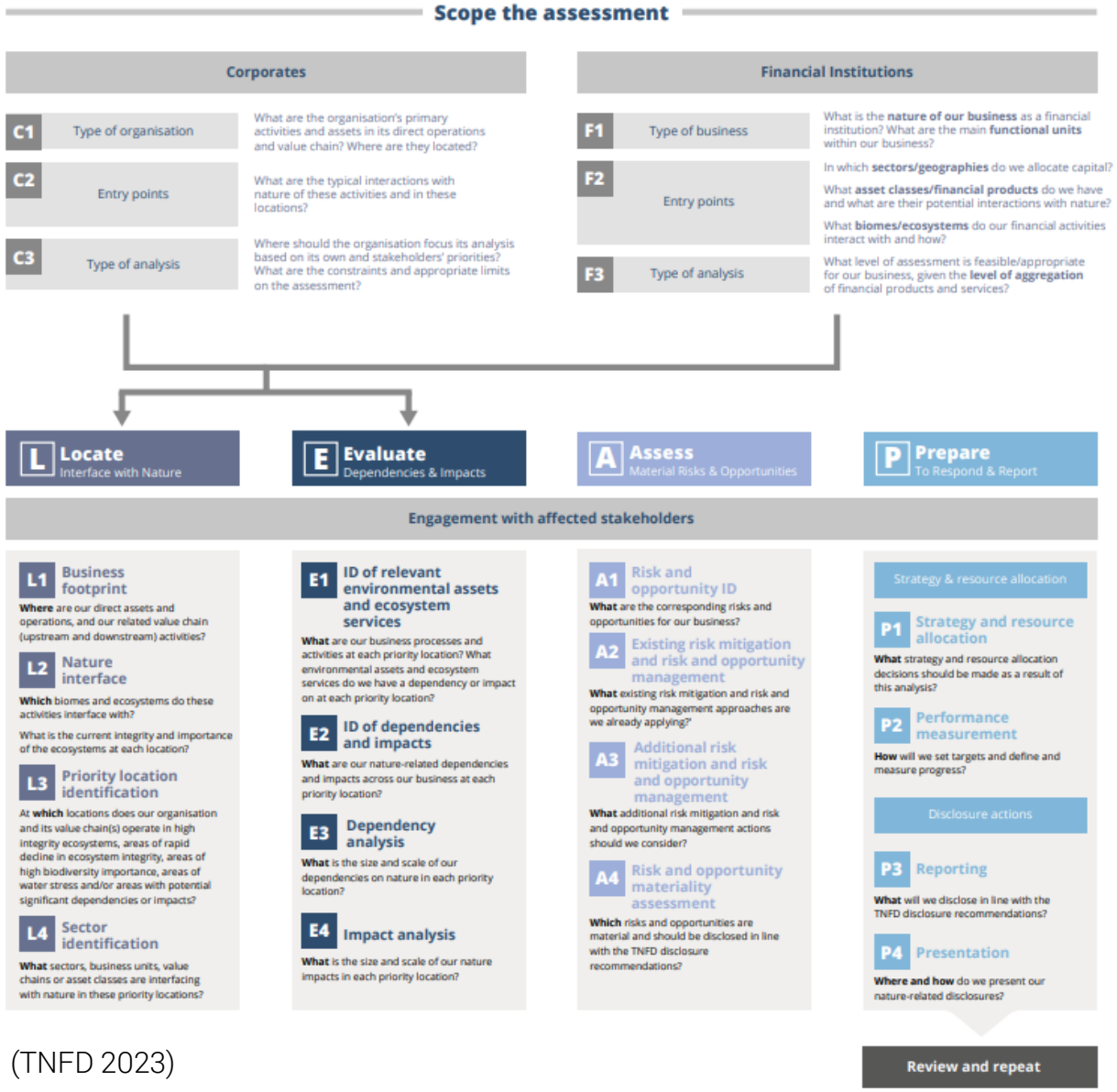
LEAP APPROACH

Figure 8: The TNFD's revised risk and opportunity assessment approach (LEAP) in v0.4 of the beta framework



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LEAP APPROACH

Location Prioritization Criteria in TNFD v0.4

Category	Criteria in TNFD v0.4 for identifying priority locations in L3 of the LEAP approach
Ecosystem integrity	The location has high ecosystem integrity and/or is in an area of rapid decline in ecosystem integrity. The integrity of an ecosystem is the extent to which the composition, structure, and function of an ecosystem falls within its natural range of variation
Biodiversity importance	The area is of biodiversity importance, including, but not limited to, protected areas or otherwise internationally recognised areas
Water stress	The location is an area experiencing water stress, where the quality and/or quantity of available water is deteriorating
Dependencies and impacts on nature	The organisation is likely to have significant dependencies and impacts in the location (based on a high-level evaluation of potential dependencies and impacts).

LEAP APPROACH

Three methods for assessing nature-related risks in Annex 4.6:

1. Heatmap
2. Asset Tagging
3. Scenario-Based Risk Method

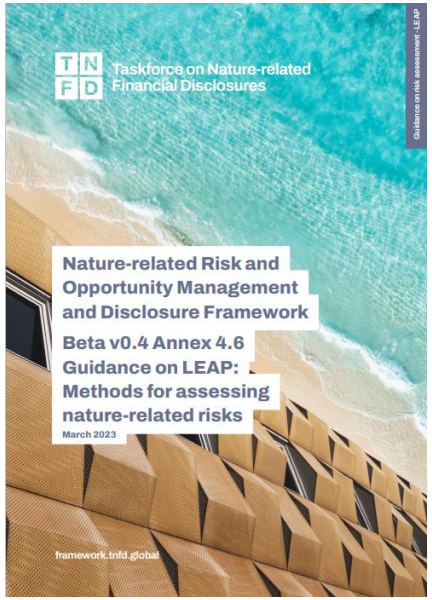

Figure 2: A heatmap helps identify sectors where exposure to nature-related risks has the potential to be most material (illustrative)

	Dependencies		Impacts						
			Land use	Water use	Pollution				Low – High
SASB Sectors	Soil quality	Water	Land use	Water use	Air pollution	Solid waste pollution	Soil pollution	Water pollution	AUM (% of total)
1 Agricultural Products & Tobacco	High	High	High	High	Low	Low	High	High	2%
2 Consumer Goods	Low	Low	Low	High	Moderate	Low	Moderate	Moderate	5%
3 Extractives & Minerals Processing	Low	Moderate	High	High	High	High	Moderate	High	14%
4 Financials	Low	Low	Low	Low	Low	Low	Low	Low	16%
5 Food & Beverage (ex. Agriculture & Tobacco)	Low	Moderate	Low	High	Low	Moderate	Low	Low	11%
6 Health Care	Low	High	Low	High	Low	Moderate	High	High	6%
7 Infrastructure (ex. Utilities & Generators)	Low	High	High	Low	Low	High	Low	Low	2%
8 Renewable Resources & Alternative Energy	Low	High	Low	High	Low	Low	High	High	3%
9 Resource Transformation	Low	Low	Low	High	Moderate	High	High	High	6%
10 Services	Low	Low	Low	Moderate	Low	Low	Moderate	High	12%
11 Technology & Communications	Low	Low	Low	Low	Low	Low	High	High	15%
12 Transportation	Low	Low	Moderate	High	Moderate	Moderate	High	High	5%
13 Utilities & Electricity Generators	High	High	High	High	High	High	High	High	3%

AUM: Assets under management

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SCENARIO ANALYSIS

Step by Step Scenario Analysis Guidance

Step 1: Identifying the relevant driving forces

Step 2: Placing the business or facility along the uncertainty axes

Step 3: Using scenario storyline descriptions

Step 4: Identifying high-level business decisions

Driving force category	Driving force	Continuum of variation
Local ecosystem asset interactions, dependencies and impacts	Changes to the state of nature	Mild <-> severe
	Number of ecosystems impacted	Single <-> multiple
	Changes in ecosystem services provision	Mild <-> severe
	Speed of change (to state of nature and/or ecosystem services)	Slow and incremental <-> fast and threshold
	Climate change (one of five drivers of nature change)	Mild <-> severe
Finance and insurance	Cost of capital	Abundant and cheap <-> scarce and expensive
	Sensitivity of capital	Insensitive to nature impacts and dependencies <-> sensitive to nature impacts and dependencies

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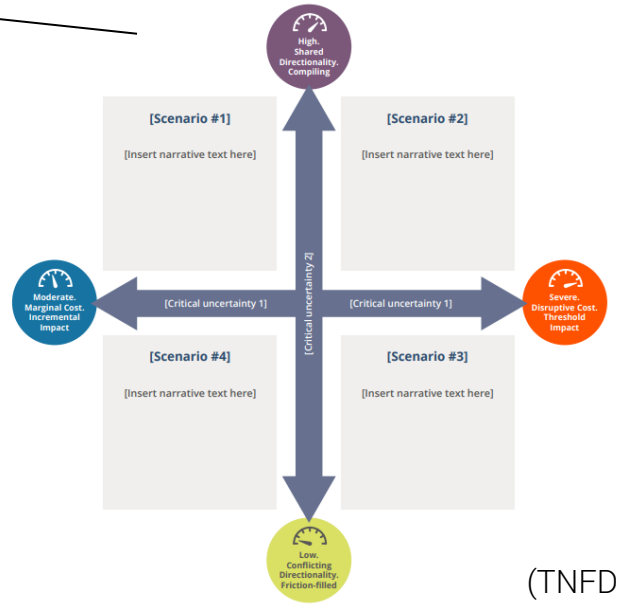

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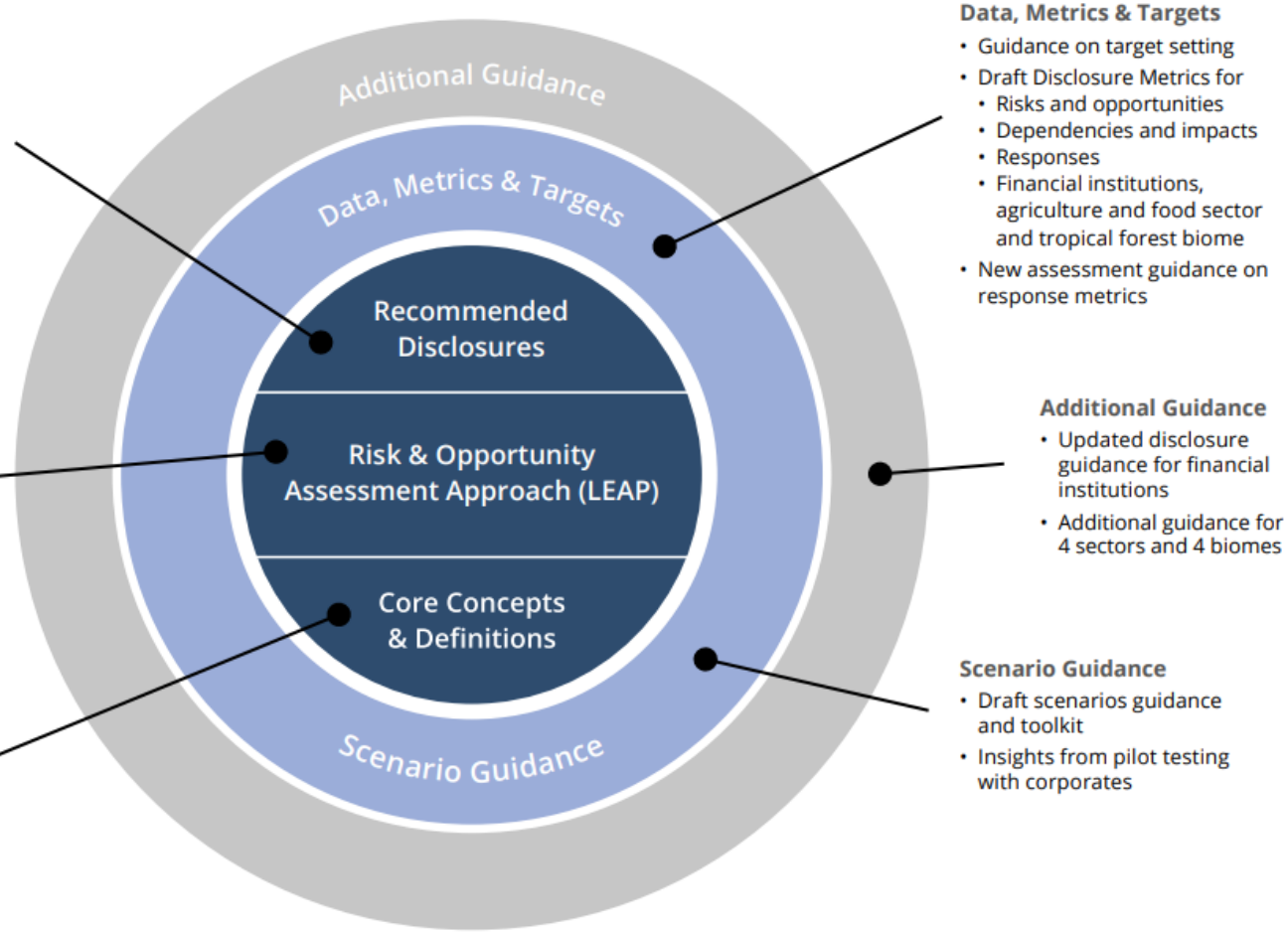
OTHER UPDATES

Figure 2: Updates to the TNFD beta framework in v0.4



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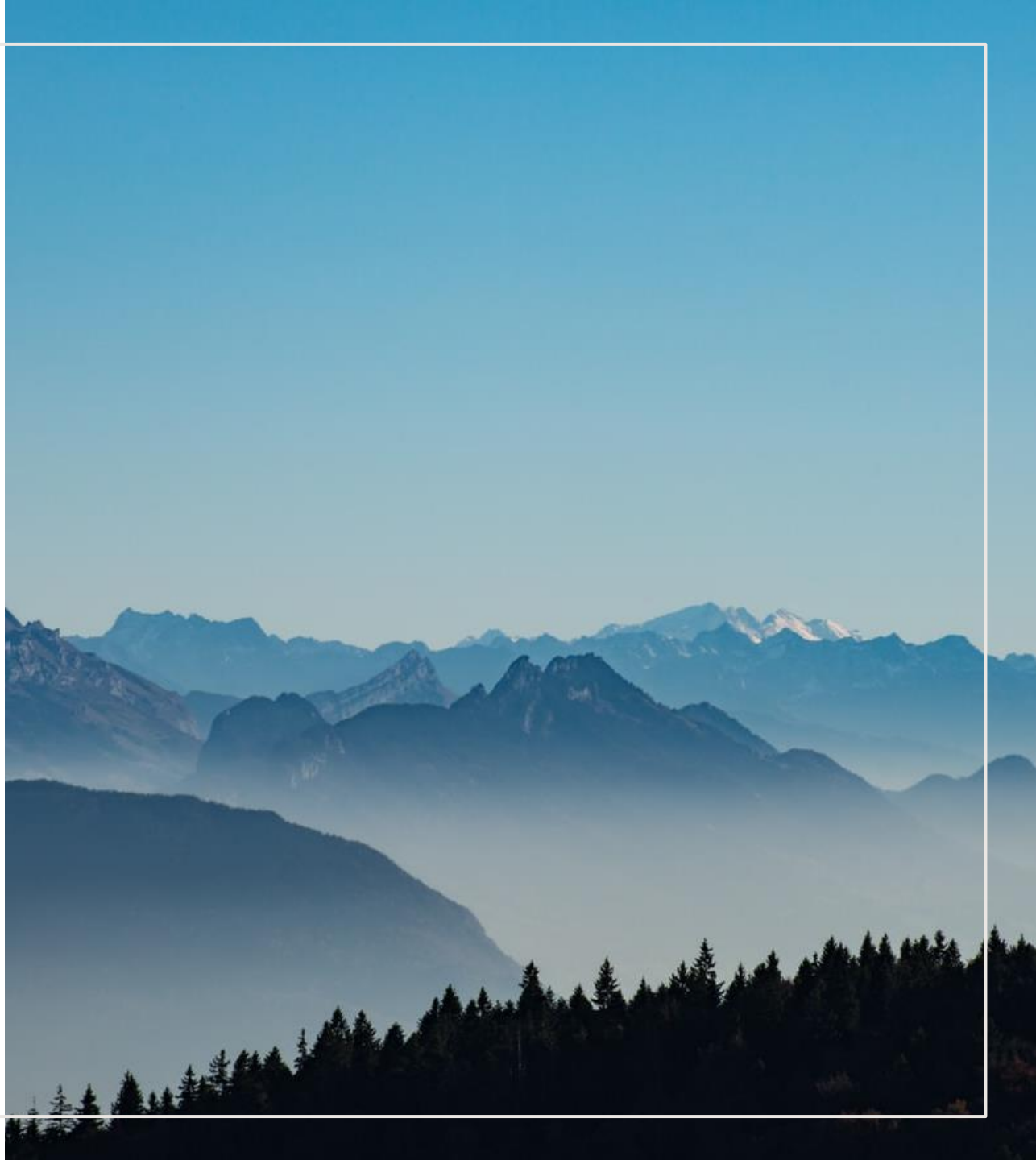
Interactive Quiz + Discussion

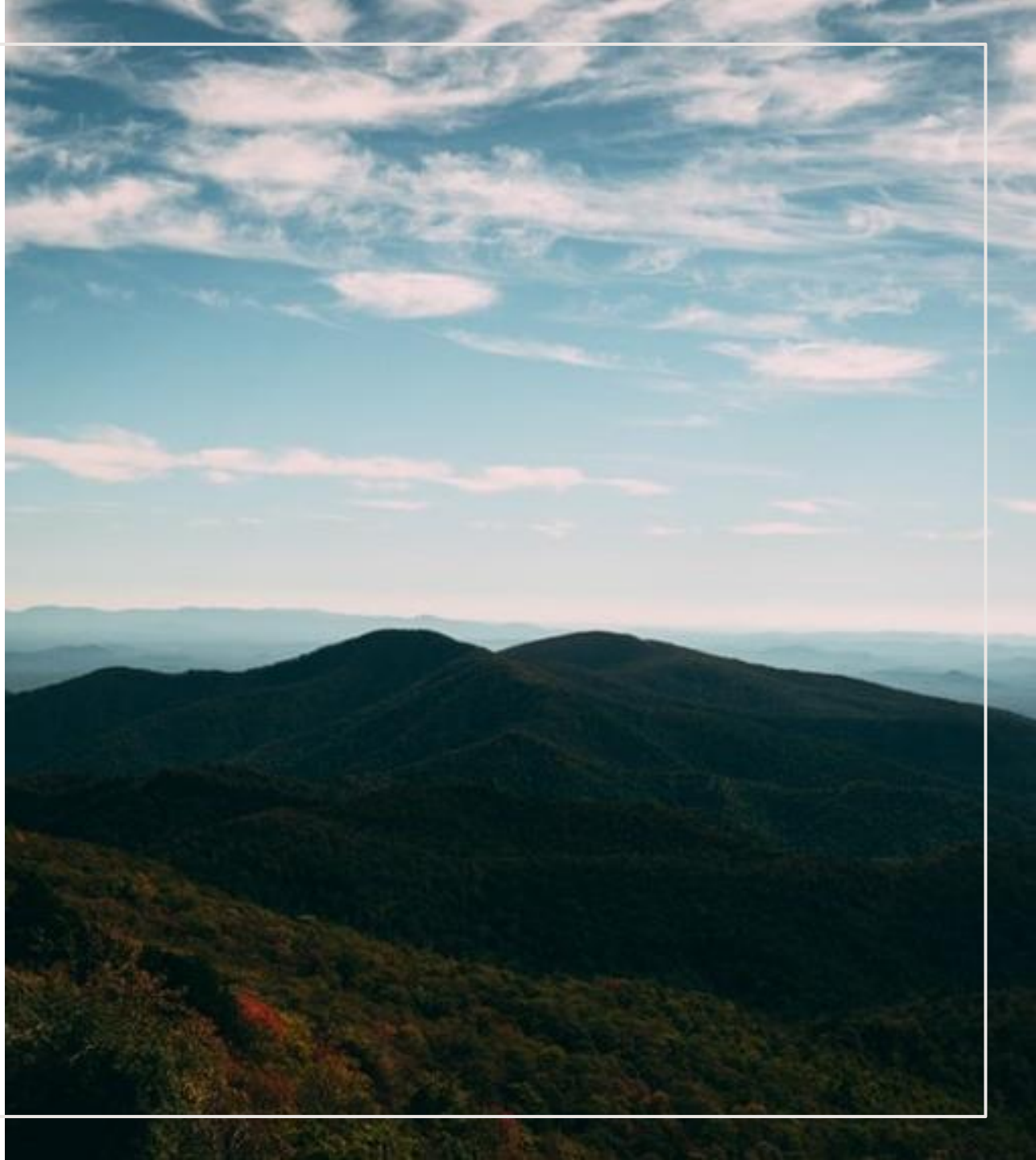
INTERACTIVE QUIZ + DISCUSSION

- What are your comments and reflections on the TNFD v0.4 updates? How is your organisation engaging with the TNFD framework?
- Please go to Menti.com and enter the code 6471 3986



BREAK

- 5 mins Coffee Break



Presentation: Deep-dive into Metrics in TNFD v0.4

DEEP-DIVE INTO METRICS IN TNFD V0.4

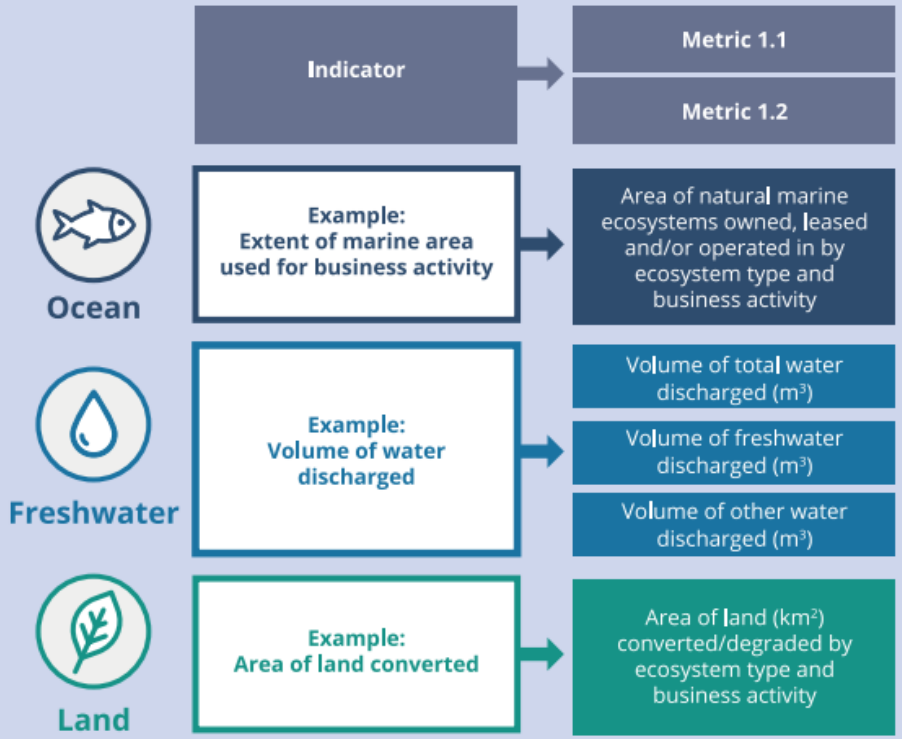
1. TNFD's definition of Metrics
2. TNFD's overall approach to metrics
3. Overview
4. Disclosure Metrics
5. Core Global Metrics
6. Sector Specific Assessment Metrics
7. Response Metrics

TNFD'S DEFINITION OF METRICS

Box 5: Definitions of indicators and metrics

An **indicator** is a quantitative or qualitative factor or variable that provides a simple and reliable means to measure performance.[6]

A **metric** is a system or standard of measurement.[7]



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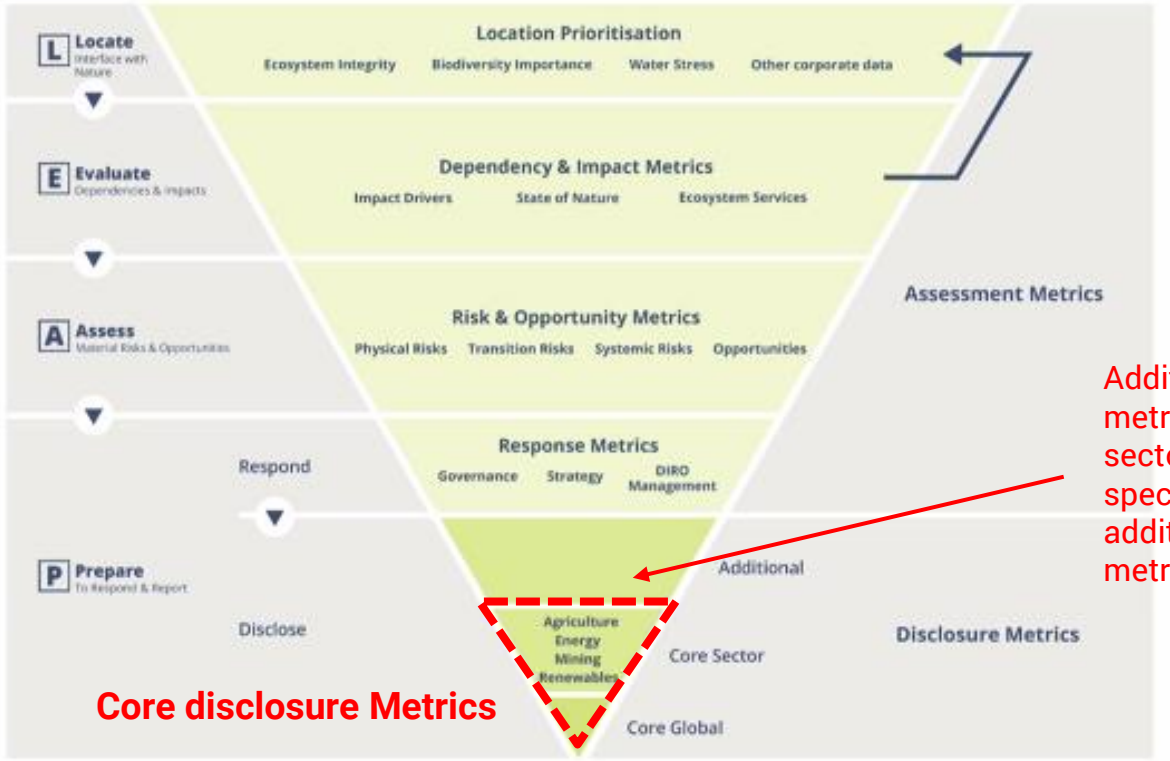
TNFD'S OVERALL APPROACH TO METRICS

TNFD aims to develop a standardized and integrated approach to the measurement of nature-related dependencies, impacts, risks and opportunities with the following characteristics:

- Scientifically robust and sensitive to changes
- Provides comparable, high-quality data and insights
- Practical to implement and can be used at scale
- Used for risk and opportunity management, transition planning and corporate target setting
- Aligns with broader global public policy goals for reversing nature loss

OVERVIEW

Metrics - Indicators and metrics types



Additional disclosure metrics will also include sector and biome specific additional disclosure metrics.

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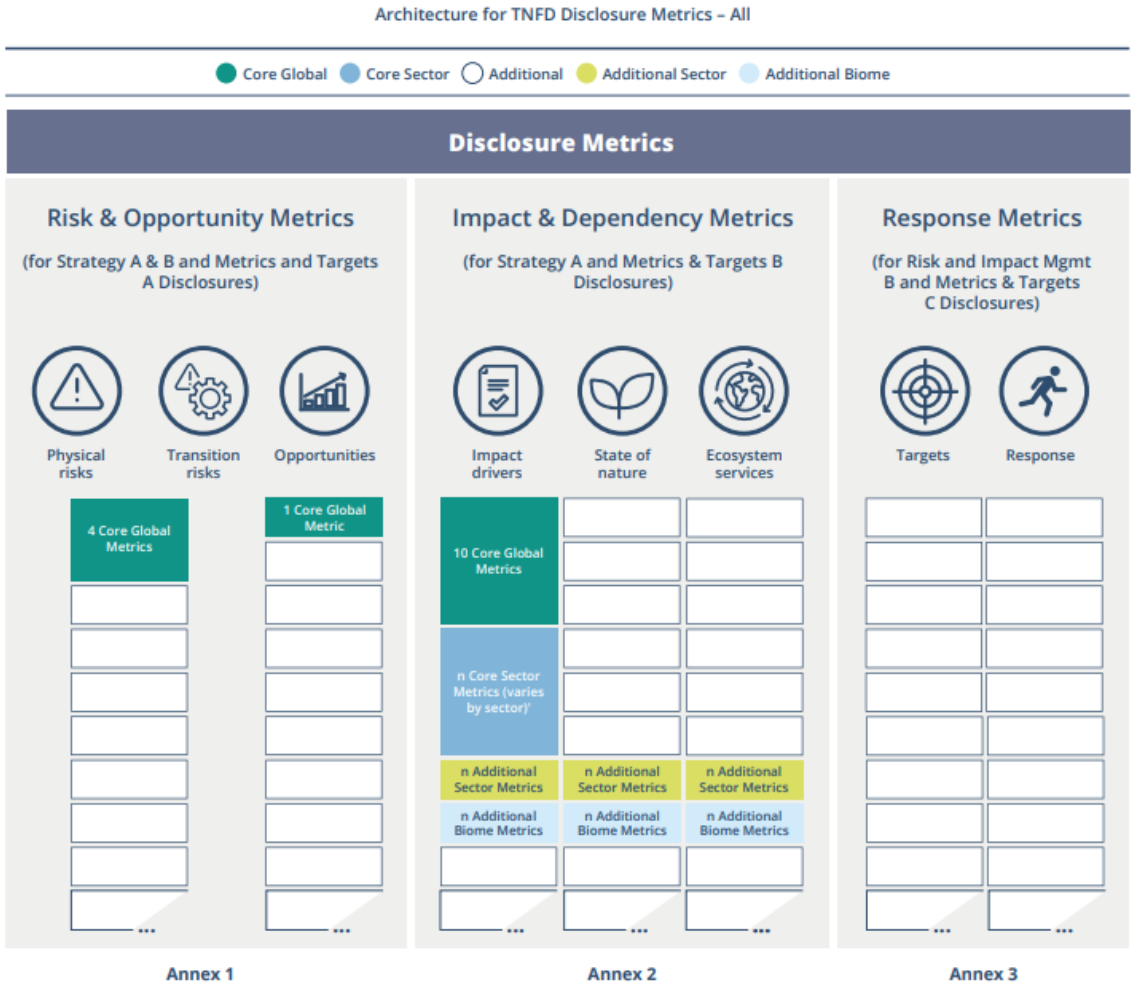
DISCLOSURE METRICS

Core Disclosure Metrics
- Core Global Metrics
- Core Sector Metrics

Additional Disclosure metrics
- Additional Sector Metrics
- Additional Biome Metrics



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CORE GLOBAL METRICS

Table 8: Summary of TNFD's core global metrics

Core global metrics: Impacts and dependencies	
Climate change	Scope 1, 2 and 3 GHG emissions – refer to TCFD
Land/freshwater/ ocean-use change	Extent of land/freshwater/ocean use change, by type of ecosystem[11] and business activity
	Extent of land/freshwater/ocean use change, by type of ecosystem[12] and business activity, for prioritised ecosystems
Pollution/pollution removal	Total pollutants released to soil split by type
	Volume of water discharged and concentrations of key pollutants in the wastewater discharged by type
	Total amount of hazardous waste generated by type
	Total non-GHG air pollutants by type
Resource use/ replenishment	Total water withdrawal and consumption from areas of water stress
	Quantity of high-risk natural commodities sourced from land/ocean/freshwater split into types
	Quantity and share of natural commodities sourced from priority ecosystems split into types

Core global metrics: Risks and opportunities	
Nature-related risks	Proportion and total annual revenue exposed to 1) physical risks and 2) transition risks
	Proportion and value of assets exposed to nature-related 1) physical risks and 2) transition risks
	Proportion and value of assets/total annual revenue exposed to risks by risk rating
	Proportion and total annual revenue/value of assets with substantial dependence on ecosystem services or with a high impact on nature
Nature-related opportunities	Value of capital allocated to nature-related opportunities, by type of opportunity, with reference to a jurisdictional green taxonomy

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SECTOR SPECIFIC ASSESSMENT METRICS – 'EVALUATE' METRICS

Evaluate Metrics – Oil and Gas				
Metric Category	**Sub-category 1**	**Sub-Category 2**	**Sector-Specific Metrics**	**Source**
Impact Driver	Resource use/replenishment	Water use	Total water withdrawal by source	GRI 303
Impact Driver	Pollution/pollution removal	Non-GHG air pollution	Air emissions of the following pollutants: (1) NOx (excluding N2O), SOx, VOCs, PM10	SASB
State of Nature	Species	Species	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	GRI EN 15
State of Nature	Ecosystems	Ecosystem condition and Extent	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff	GRI EN 25

Evaluate metrics – Power Generators and Electric Utilities – Offshore Wind				
Metric Category	**Sub-category 1**	**Sub-Category 2**	**Sector-Specific Metrics**	**Source**
State of Nature	Ecosystems	Ecosystem Condition and Extent	Estimated number of birds injury/mortality	EEA
State of Nature	Ecosystems	Ecosystem Condition and Extent	Change in fish/coral/marine invertebrate species richness	TNFD

Evaluate metrics – Power Generators and Electric Utilities – Solar				
Metric Category	**Sub-category 1**	**Sub-Category 2**	**Sector-Specific Metrics**	**Source**
Impact Driver	Resource use/replenishment	Water use	Percentage and total volume of water recycled and reused	GRI EN10
State of Nature	Ecosystems	Ecosystem condition and extent	Operations with significant actual and potential negative impacts on local communities	GRI (Disclosure 413-2

SECTOR SPECIFIC ASSESSMENT METRICS – 'ASSESS' METRICS

Assessment Metrics – Power Generators and Electric Utilities – Offshore Wind			
Risk Category	**Metric Category**	**Sector-Specific Metrics**	**Source**
Physical Risks	Changes to protection from natural hazards	Write-offs and early retirement of existing assets	TNFD
Physical Risks	N/A	Number of blackouts due to animal collision and costs associated	TNFD
Transition Risks	Market	Loss of market share and investor goodwill	TNFD
Transition Risks	Policy and Legal	Description and costs related to loss of operating areas	

Assessment Metrics – Power Generators and Electric Utilities – Solar			
Risk Category	**Metric Category**	**Sector-Specific Metrics**	**Source**
Physical Risks	Changes to protection from natural hazards	Increased capital expenditure on adaptation: protection against floods/landslides	TNFD
Physical Risks	Changes to protection from natural hazards	Reduction in revenue due to interruption of operations/supply chain	TNFD
Transition Risks	Policy and legal	Losses due to delays in operations/ permit denials	TNFD
Transition Risks	Reputation	Increased costs due to work interuptions / lack of employee engagement	TNFD

RESPONSE METRICS

	Locate	Evaluate	Assess	Prepare
1. Nature risk: water dependency	Organisation identifies that it is consuming water from an area experiencing water stress	Organisation identifies that its production depends on an ongoing supply of water, and that its use of water has an impact on that supply	Organisation assesses the risk and opportunities arising from its water use. This could be up to the full financial value of the product lines that depend on the water supply, and determines the risk level	Organisation assesses different response options and decides to increase water-efficiency, increase the amount of recycled and reused water and have all sites certified by ISO 14001
Indicators/ metrics	**Location prioritisation:** Area of direct and indirect influence that overlaps with potential or likely water-stressed areas (absolute and % change) Ha of direct assets/sites located in a water-stressed area (absolute and % change)	**Exposure:** Volume of water consumption by source, from water-stressed areas (absolute and % change) Volume of water recycled or reused (absolute and % change) Volume of water loss (absolute and % change) Measurement of the ecosystem condition, e.g. MSA (absolute and % change) Water depth in reservoirs (absolute and % change) Amount of secure water supply (absolute and % change)	**Magnitude:** Increased costs of water supply (absolute and % change) Reduction in revenue due to interruption of operations (absolute and % change) Costs of relocating operations Number of business lines exposed Value of assets/revenues dependent on the area Increased operational costs due to reductio in loyalty from stakeholders	**Response:** Performance against commitment to increase water efficiency by 40%, reduce water consumption by 30% and increase reused and recycled water by 80% (baseline y-1) % of sites certified by ISO 14001 Number of meaningful engagements with affected stakeholders when assessing water-related dependencies and impacts, including understanding the impacts of loss of ecosystem services on local communities % of affected stakeholders meaningfully engaged on water-related issues
2. Nature risk: land use change impact	Organisation identifies that it is converting natural ecosystems for agricultural purposes in close proximity to a biodiversity hotspot	Organisation identifies that as a result of the land use change, there may be a reduction in the integrity of the biodiversity hotspot	Organisation assesses the risk and opportunities arising from the land use change, including the financial value of dependent product lines, and determines the risk level	Organisation assesses different response options and decides to set up a sustainable management programme in the area, create an area-specific biodiversity net gain target and monitor biodiversity levels in the area twice a year
Indicators/ metrics	**Location prioritisation:** Area of direct and indirect influence that overlaps with areas of low integrity or high biodiversity importance (absolute and % change) Ha of direct assets/sites located in areas of low integrity or high biodiversity importance (absolute and % change)	**Exposure:** Extent of terrestrial ecosystems converted/ degraded by ecosystem type and business activity (absolute and % change) Measurement of the ecosystem condition, e.g. MSA, species richness (absolute and % change) Presence/density of trees/shrubs (absolute and % change) Vegetation index (absolute and % change) Altered level of livestock and or crops (e.g. reduced/avoided loss of livestock and/or crops) (absolute and % change)	**Magnitude:** Value of assets/revenues dependent on the area Increased operational costs due to reductio in loyalty from stakeholders Compliance costs Description and costs related to loss of operating areas Costs of relocating operations	**Response:** Commitment to no conversion of natural ecosystems Performance against commitment for biodiversity net gain (baseline y-1) Number of meaningful engagements with affected stakeholders, including rightsholders and local communities, when assessing biodiversity-related impacts % of affected stakeholders meaningfully engaged in area Extent, duration and monitoring frequency of ecosystem restoration projects

(TNFD 2023)

RESPONSE METRICS

Table 7: Examples of response metrics connected back to mitigation hierarchy categories

Mitigation hierarchy component	Illustrative response metrics	Framework
Avoid	Commitment to no conversion of natural ecosystems	TNFD
	Commitment to no negative impacts in areas of biodiversity importance	TNFD
	Processes and due diligence in place to prevent impact drivers	TNFD
	Actions to avoid negative impacts (investment and extent)	TNFD
Reduce	Nature management actions adopted to reduce impact driver (e.g. adopting regenerative agriculture)	TNFD
	Processes and due diligence in place to manage impact drivers	TNFD
	Actions to reduce negative impacts (investment and extent)	TNFD
Restore and regenerate	Restoration of negatively impacted ecosystems (investment and extent) by ecosystem/biome type and split into: • Required by regulation • Required by certifier • Voluntary	CDP
	Biodiversity offsets to compensate for residual impacts (as a last resort): • Total purchased biodiversity offsets by type • Total sold biodiversity offsets by type	ESRS-4
	Quality criteria and standards for biodiversity offsets	TNFD

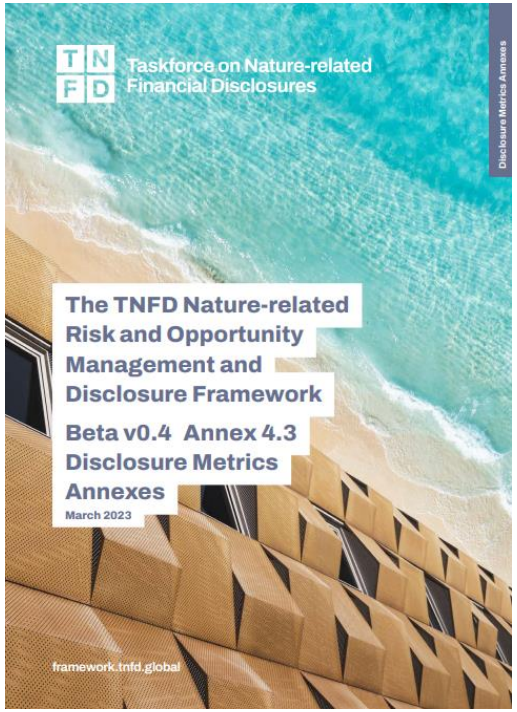
Examples of response metrics connected back to the mitigation hierarchy

Mitigation hierarchy component	Illustrative response metrics	Framework
Transform	Production, consumption and sourcing of raw materials from ecosystems that maintain or enhance conditions for nature (value of)	ESRS-4
	Circular material use rate	CDP
	Number of sector-wide or multi-stakeholder initiatives supported	TNFD
	Number of knowledge products/research projects directed at sector-wide or regional change	TNFD

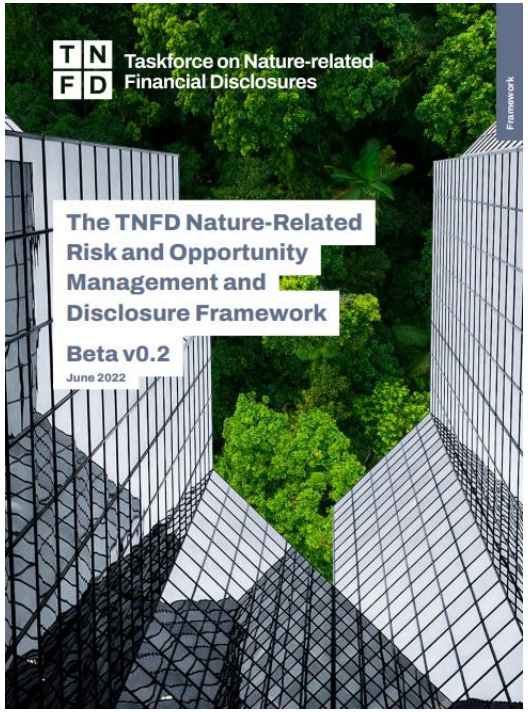
(TNFD 2023)

WHERE TO FIND EACH TYPE OF METRICS?

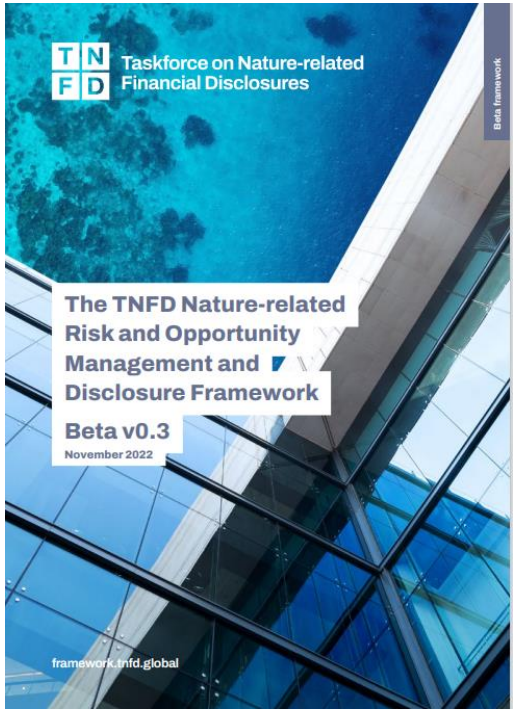
For all disclosure metrics:



For assessment metrics:
(Locate, Evaluate, Assess)



+ Annex 1, 2



+ Annexes 3.1, 3.2, 3.4

For response metrics:

Breakout Group Discussions

BREAKOUT GROUP DISCUSSIONS

- Please go to your assigned breakout group

DISCUSSION QUESTIONS - CORE GLOBAL METRICS

Table 8: Summary of TNFD's core global metrics

Core global metrics: Impacts and dependencies	
Climate change	Scope 1, 2 and 3 GHG emissions – refer to TCFD
Land/freshwater/ ocean-use change	Extent of land/freshwater/ocean use change, by type of ecosystem[11] and business activity
	Extent of land/freshwater/ocean use change, by type of ecosystem[12] and business activity, for prioritised ecosystems
Pollution/pollution removal	Total pollutants released to soil split by type
	Volume of water discharged and concentrations of key pollutants in the wastewater discharged by type
	Total amount of hazardous waste generated by type
	Total non-GHG air pollutants by type
Resource use/ replenishment	Total water withdrawal and consumption from areas of water stress
	Quantity of high-risk natural commodities sourced from land/ocean/freshwater split into types
	Quantity and share of natural commodities sourced from priority ecosystems split into types

Core global metrics: Risks and opportunities	
Nature-related risks	Proportion and total annual revenue exposed to 1) physical risks and 2) transition risks
	Proportion and value of assets exposed to nature-related 1) physical risks and 2) transition risks
	Proportion and value of assets/total annual revenue exposed to risks by risk rating
	Proportion and total annual revenue/value of assets with substantial dependence on ecosystem services or with a high impact on nature
Nature-related opportunities	Value of capital allocated to nature-related opportunities, by type of opportunity, with reference to a jurisdictional green taxonomy

(TNFD 2023)

- Clarity: Are the core global metrics clearly defined?
- Feasibility: Are the metrics feasible to apply?
- Coverage: Are there other metrics that you think companies across all sectors should be recommended to disclose? What characteristics or parameters of metrics should TNFD specify?
- For your company's sector, what metrics do you think all companies with the sector should be recommended to disclose (as core sector specific metrics)?
- For your company's sector, what should the guidance on core and additional metrics specify?

DISCUSSION QUESTIONS - BIOME SPECIFIC DISCLOSURE METRICS (TROPICAL FOREST)

Table 8: Quantitative additional disclosure metrics for the tropical forest biome

Metrics category	Driver of nature change	Cross-sector indicator	Metrics no.	Metrics for tropical forests biome	Source
Impact drivers	Land/ freshwater/ocean-use change	Extent of land/ freshwater/ ocean use change, by type of ecosystem[7] (before and after change) and business activity, for prioritised ecosystems	BA 2.0	Natural forest cover loss within areas of direction operational control. This should include a description of methods and tools used to assess natural forest cover loss.	TNFD
			BA 2.1	Landscape-level or country-ecoregion-level natural forest cover loss within areas of indirect operational control (i.e. sourcing locations)	TNFD
			BA 2.2	Spatial overlap (ha) of business activities with deforestation hotspots	TNFD
Ecosystem condition and extent	N/A	Quantitative measurement of change to ecosystem condition and extent in priority locations the organization depends or impacts on	BA 6.0	Ecosystem condition as measured by Mean Species Abundance (MSA) (adjusted for management in case of forest-based activities such as logging)	Schipper et al. 2020 https://www.globio.info/what-is-globio
			BA 6.1	Maximum STAR-t (Species Threat Abatement and Restoration metric)	Mair et al. 2021 https://www.nature.com/articles/s41559-021-01432-0
			BA 6.2	Forest Landscape Integrity Index (in sourcing locations or areas under direct operational control for forest-based enterprises such as logging)	Grantham et al. 2020 https://www.forestintegrity.com/

(TNFD 2023)

- Clarity: Are the tropical forest biome metrics clearly defined?
- Feasibility: Are the tropical forest biome metrics feasible to apply?
- Coverage: Any suggestions on what other metrics should be added to the Tropical Forest biome specific metrics?

DISCUSSION QUESTIONS - RESPONSE METRICS

Table 7: Disclosure metrics for responses to nature-related issues

Category of nature-related responses	Metric no.	Metrics
Changes to nature (dependency and impact): mitigation hierarchy steps	A 17.0	• Circular material use rate (%)
	A 17.1	• Proportion of sites producing nature action plans (%)
	A 17.2	• Type, scope (activities, geographies) and prices applied for biodiversity and ecosystem-related pricing schemes
	A 17.3	• Rate of reuse and recycling (%)
	A 17.4	• Credible and transparent third-party certification: % and/or value of production, consumption and sourcing of raw materials, per certification type
	A 17.5	• Production, consumption and sourcing of raw materials that is traceable (%)
	A 17.6	• Suppliers committed to sustainable production (%)

	A 17.7	• Restoration of negatively impacted ecosystems (investment and extent) split into ecosystem/biome type and split into (I):
		  ◦ Required by regulation
		  ◦ Required by certifier
		  ◦ Voluntary

	A 17.8	• Value of operational/capital expenditure categorised into mitigation hierarchy actions (avoid, reduce, restore and regenerate, transform) (value and/or proportions)
	A 17.9	• Extent, duration and monitoring frequency of ecosystem restoration projects
	A 17.10	• Value of total investment in projects that avoid or reduce negative nature impacts or restore ecosystems where impacts cannot be avoided (value / proportion of projects)
	A 17.11	• Value of investment in nature-based solutions by type
Voluntary conservation, restoration and regeneration	A 18.0	• Extent, duration and monitoring frequency of voluntary ecosystem restoration projects
	A 18.1	• Value of investment in and extent of additional conservation actions split into type of action and type of ecosystem/biome applied to
	A 18.2	• Value of investment in nature-related community development programs intended to enhance positive impacts for Indigenous Peoples
Participation in voluntary and mandatory credit market schemes	A 19.0	• Voluntary credit market schemes: Value of total biodiversity offsets purchased and sold by type
	A 19.1	• Mandatory credit market schemes: Value of total biodiversity offsets purchased and sold by type
Capital allocation / investment	A 20.0	• Value of investment in nature-related interventions and solutions as defined in relevant government or regulator green investment taxonomy

- Is the TNFD guidance on response metrics clear?
- What constitutes a good response metric?
- What other categories of response disclosure metrics could be added to the list of examples proposed by TNFD?

(TNFD 2023)

SUMMARY OF BREAKOUT GROUP DISCUSSIONS

- Summary of Group Discussion – Group 1
- Summary of Group Discussion – Group 2

Closure and Next Steps

CLOSURE AND NEXT STEPS

- Next steps:
  - UNEP-WCMC Proteus team to summarize the discussion results of the workshop
  - Share the summary report with all workshop participants
  - Send the summary report to the TNFD
- A.O.B.

TNFD Proteus Workshop

Thank you !

Reference

- Taskforce on Nature related Financial Disclosure (2023) The TNFD Nature-related Risk and Opportunity Management and Disclosure Framework Final Draft - Beta v0.4. Available at: framework.tnfd.global/wp-content/uploads/2023/03/23-23882-TNFD_v0.4_Integrated_Framework_v7.pdf

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