



**Taskforce on Nature-related
Financial Disclosures**

Nature-related Risk and Opportunity Management and Disclosure Framework

Beta v0.4 Annex 4.7 Guidance on Response Metrics in the Prepare Phase of LEAP

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Annex 4.7: Guidance on response metrics in the Prepare phase of LEAP

1. Overview of response indicators and metrics

This document provides guidance on assessment metrics for responses to nature-related dependencies, impacts, risks and opportunities. These are relevant to the Prepare phase of the LEAP approach. In developing the approach to response measurement, the Taskforce has drawn on a wide range of existing standards and included the input and advice of the TNFD's knowledge partners.

The TNFD defines the following categories of response indicators and metrics:

- Governance;
- Strategy; and
- Dependency, impact, risk and opportunity assessment and management.

Response indicators and metrics can be at the **organisation level** or can be **product or service line-specific or location-specific**. To ensure effective management of nature-related dependencies, impacts, risks and opportunities, organisations should ensure they are forming and assessing responses at all levels. The levels of indicators and metrics are nested (see Figure 1). Organisation level response indicators consider the overall performance objectives for risk management and ensure the right governance is in place to facilitate the management of more detailed product/service line risks, which then link to the most granular location-based indicators.

Figure 1: Levels of metrics

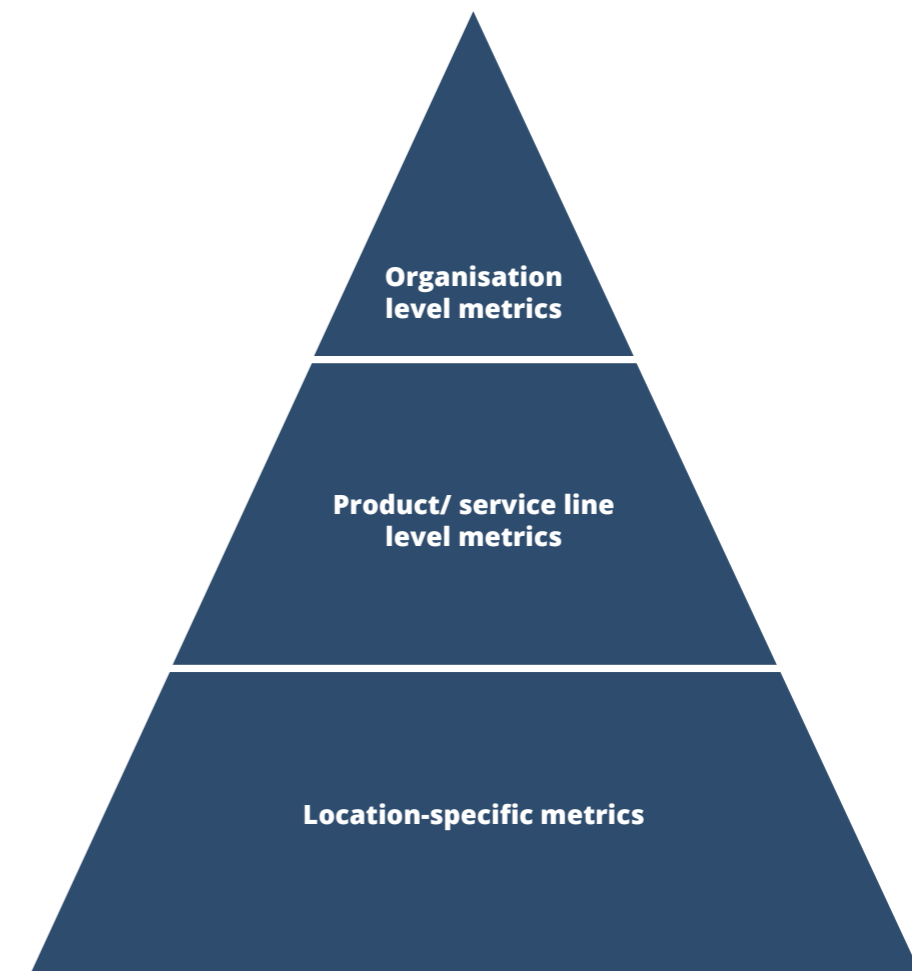


Table 2 contains illustrative indicators for each category of response metrics. Many responses will be specific to the sector and biome with which the organisation is interacting. Where this is the case, further indicators and metrics will be provided in TNFD sector and biome additional guidance.

2. Performance against targets

Once responses to the nature risk and opportunity assessment have been decided by management, an organisation's performance and progress against targets should be monitored over time (refer to the TNFD [guidance on targets](#), including guidance on science based targets for nature developed with SBTN). The indicators used to monitor performance will likely relate to Exposure (dependencies and impacts, from the Evaluate phase of LEAP) and Magnitude (risks and opportunities, from the Assess phase of LEAP), compared to a baseline and/or reference state.



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Dependencies and impacts on nature will require performance indicators to monitor:

- Changes to business impact drivers (positive or negative);
- Changes to the state of nature (ecosystems and/or species);
- Changes to the provision of ecosystem services.

Performance indicators can also relate to the **response identified**, for example, if the organisation has committed to having a certain number of certifications in place or a certain amount of training in nature undertaken by staff. Performance metrics can be used to monitor progress over time towards these response targets.

Performance metrics will relate to the commitments and targets set by the organisation. Examples include:

- Additional water availability and/or increased water catchment in m³/year (International Capital Markets Association)
- Reduction in changes in the nutrient and/or pH level for agricultural soils (International Capital Markets Association)
- Total volume of water withdrawn from areas with water stress, compared to previous year (CDP)
- Change in withdrawal volume as a result of water produced (CDSB Water)
- Proportion and/or value of production, consumption and sourcing of raw materials from ecosystems that have managed to maintain or enhance conditions for nature (CDP)
- Circular material use-rate (CDP)
- Proportion of value-chain assessed in nature-related assessment (CDP)
- Percentage of total portfolio value that is allocated to products/services that support nature (CDP)
- Proportion and/or value of production, consumption and sourcing of raw materials that is traceable (CDP)

3. Illustrative response indicators

Table 2 below provides illustrative response indicators, split into those that can be used at the organisation, product/service line and location-specific level.

Illustrative response indicators are split into the following categories and sub-categories:

Table 1: Response action categories and sub-categories

Response action category	Response action sub-categories
Governance	
Strategy	General Policies, commitments and targets Engagement Capital allocation/investment
Dependency, impact, risk and opportunity management and assessment	General Value chain Changes to nature (dependency and impact): mitigation hierarchy steps Voluntary conservation, restoration and regeneration Dependency, impact, risk and opportunity assessment

Table 2: Illustrative response indicators and metrics

Sub-category	Indicator (I) / Metric (M)	Reference	Organisation level	Location level	Product/Service level
Governance					
	Person/people responsibility is assigned to ensure compliance with regulations (I)	ESRS-2			
	Highest level of responsibility and accountability for nature policies, commitments and targets (I)	WBA-A2; GRI General Disclosure 2021			
	Incentives for employees to reward the effective delivery of nature strategies (value of incentives, levels applied to and performance indicators) (I)	WBA-A2			
	Frequency of communication of performance and progress in priority locations to management (M)	CDSB; GRI 2: General Disclosure 2021			
	Frequency that nature-related issues are a scheduled agenda item at board meetings (M)	CDP			
	Members of board with competence on nature-related issues (I)	CDP; GRI 2: General Disclosures 2021			

Sub-category	Indicator (I) / Metric (M)	Reference	Organisation level	Location level	Product/Service level
Strategy					
General	Level of integration of nature-related issues into overall risk management and strategy (I)	ESRS-4; GRI 2: General Disclosures 2021			
	Embeddedness of circular economy plans within the overall business strategy (I)	ESRS-5			
Policies, commitment and targets	Incorporation of lessons learned into organisation's operational policies and procedures (I)	GRI			
	Policies, commitments and targets in place for each significant impact driver identified (e.g. commitment for zero conversion across ecosystems) (I)	GRI Biodiversity Standard 304-6			
	Embeddedness of mitigation hierarchy principles into management policies, commitments and targets (I)	WBA-A1; GRI Biodiversity Standard 304-5			
	Where relevant, policies, commitments and targets in place for the following (I): <ul style="list-style-type: none"> • Circular economy risks; • Commodity-specific risks; • Operations and sourcing; and • Screening and engaging with suppliers 	CDP Forests; ESRS-4; GRI 308: Supplier Environmental Assessment 2016			

Sub-category	Indicator (I) / Metric (M)	Reference	Organisation level	Location level	Product/Service level
Policies, commitment and targets	Production/consumption covered by nature commitments (% of total) (M)	CDP			
	Time commitments in place for targets and commitments made (% of total) (M)	CDP			
	Policies and commitments connected to targets (I)	CDP			
	Processes in place to ensure that business activities are consistent with nature policies, commitments and targets (I)	CDP; GRI 2: General Disclosures 2021			
	Alignment with nature-related policies and commitments to a pathway leading to nature's full recovery by 2050 (I)	WBA-B3; GRI Biodiversity Standard 304-6			
	Targets that are time-bound and quantifiable, and in place for both volume and intensity where possible (% of total) (M)	CDP, CDSB			
	Targets that address short-term, medium-term and long-term risks and opportunities (proportion of) (M)	CDP, CDSB			

Sub-category	Indicator (I) / Metric (M)	Reference	Organisation level	Location level	Product/Service level
Policies, commitment and targets	Targets connected to SDGs and/or planetary boundaries or other system-wide initiatives (I)	TNFD			
	Targets closely connected with significant impacts identified in the impact and dependency assessment (I)	ESRS-5			
	Targets informed by science and/or intergovernmental instruments such as the CBD (I)	ESRS-4; GRI Biodiversity Standard 304-6			
	Geographical sites/priority locations that are covered by targets (% of total) (M)	GRI Biodiversity Standard 304-6			
	Strategies, policies and commitments are in place for each biome identified to be a priority (e.g. commitment to conversion free supply) (I)	TNFD			
	Policies/commitments on the social consequences of nature-related impacts and dependencies (coverage / number of) (M)	ESRS-4; GRI Biodiversity Standard 304-6 and 304-7			

Sub-category	Indicator (I) / Metric (M)	Reference	Organisation level	Location level	Product/Service level
Engagement	Endorsement/engagement with key initiatives for priority nature issues identified (I)	CDP Water			
	Collaboration/engagement with NGOs when (I): • Forming and implementing nature-related policies and commitments; and • Understanding nature-trends	CDP Forests			
	Engagement in activities that could directly or indirectly impact public policy on nature (I)	CDP Forests			
	Suppliers engaged for priority nature issues identified/when assessing nature-related issues (% of) (M)	CDP Water			
	Staff training on nature-related issues (investment in) (I)	CDP Water			
	Extent to which customers/suppliers are engaged on circular economy topics (I)	TNFD			
	Sites that have active engagement with local stakeholders (% of) (M)	TNFD			

Sub-category	Indicator (I) / Metric (M)	Reference	Organisation level	Location level	Product/Service level
Engagement	Participation in sector-wide and/or multi-stakeholder agreements (I)	TNFD			
	Indirect supplier engagement approaches used (I): • Supply mapping tools • Supplier questionnaires • On-site meetings • Audits • Training and capacity building	CDP			
	Engagement with local and Indigenous Communities when forming nature-related management practices (I)	CDP Forests; GRI 3: Material Topics 2021			
	Investment in projects that avoid / reduce negative nature impacts or restore ecosystems where impacts cannot be avoided (value / proportion of projects) (M)	TNFD			
Capital allocation/investment	Investment in nature-related interventions and solutions as defined in relevant government or regulator green investment taxonomy (M)	TNFD			
	Development of nature-positive investment criteria (I)	TNFD			

Sub-category	Indicator (I) / Metric (M)	Reference	Organisation level	Location level	Product/Service level
Capital allocation/ investment	Investment in portfolio companies (by number and by portfolio exposure) that (I) <ul style="list-style-type: none"> • Have committed to align with nature-positive initiatives; • Have publicly available nature policies; • Have set a time bound, science-based nature target 	CDP			
	Investment in new locations/ real estate associated with nature-related activities (I)	TNFD			
	Investment in nature-related product/service lines (I)	CDP			
	Nature-related product/ technology development (I)	CDP			

Sub-category	Indicator (I) / Metric (M)	Reference	Organisation level	Location level	Product/Service level
Dependency, Impact, Risk and Opportunity Assessment and management					
General	Sites producing nature action plans (proportion of) (M)	ESRS-4; GRI's Biodiversity Standard			
	Management strategies/ plans in place for each significant impact driver (I)	TNFD			
	Actions/action plans in place that contribute to system wide change (e.g. through technological, economic, institutional and social factors and changes in underlying values and behaviours) (I)	ESRS-4			
	Implementation of biodiversity and ecosystem-related pricing schemes (I): <ul style="list-style-type: none"> • Type • Scope (activities, geographies) • Prices applied 	ESRS-4			
	Workers trained in biodiversity conservation (I)	ICMA Biodiversity			

Sub-category	Indicator (I) / Metric (M)	Reference	Organisation level	Location level	Product/Service level
Value chain	Screening of suppliers on nature issues (% screened) (M)	TNFD			
	Reduction / prevention of impact drivers across most material parts of value chain (I)	TNFD			
	Engagement with upstream and downstream partners on nature-related impacts, dependencies and risks and opportunities (% engaged with) (I)	CDP Forests and ESRS-4			
	Credible and transparent third-party certification or improvement programs: % and/or value of production, consumption and sourcing of raw materials (M), per certification type	ESRS-4			
	Traceability: % and/or value of production, consumption and sourcing of raw materials that is traceable (M)	ESRS-4			
	Suppliers committed to sustainable production (% committed) (M)	ESRS-3			

Sub-category	Indicator (I) / Metric (M)	Reference	Organisation level	Location level	Product/Service level
Changes to nature (dependency and impact): mitigation hierarchy steps	Biodiversity offsets (M): • Total mandatory offsets sold and purchased by type • Total voluntary offsets sold and purchased by type	ESRS-4			
	Quality criteria and standards for biodiversity offsets (I)	TNFD			
	Nature management actions adopted to reduce or avoid impact driver (e.g. adopting regenerative agriculture) (I)	TNFD			
	Restoration of negatively impacted ecosystems (investment and extent) split into ecosystem/biome type and split into (I): • Required by regulation • Required by certifier • Voluntary	CDP			
	Processes and due diligence in place to prevent and manage impact drivers (I):	TNFD			
	Operational/capital expenditure categorised into mitigation hierarchy actions (avoid, reduce, restore and regenerate, transform) (value and/or proportions)	TNFD			

Sub-category	Indicator (I) / Metric (M)	Reference	Organisation level	Location level	Product/Service level
Changes to nature (dependency and impact): mitigation hierarchy steps	Production, consumption and sourcing of raw materials from ecosystems that maintain or enhance conditions for nature (value of) (M)	ESRS-4			
	Circular material use rate (M)	CDP			
Voluntary conservation, restoration and regeneration	Extent, duration and monitoring frequency of voluntary ecosystem restoration projects (I)	TNFD			
	Investment in and extent of additional conservation actions split into type of action and type of ecosystem/biome applied to (currency) (I)	TNFD			
	Investment in nature-related community development programs intended to enhance positive impacts for Indigenous Peoples (I)	GRI 411-1			

Sub-category	Indicator (I) / Metric (M)	Reference	Organisation level	Location level	Product/Service level
Dependency, impact, risk and opportunity assessment	Undertaking assessment at corporate, location-specific and project/service-line levels (I)	TNFD			
	Timescale for assessing nature-related issues (e.g. consideration of past and future nature-related impacts, dependencies, risks and opportunities) (M)	CDP			
	Verification of data points (M)	CDP			
	Frequency of assessment (M)	CDP Forests			
	Proportion of locations assessed (M)	CDP			

4. Suggested matrix for connecting response indicators and metrics to other categories of metrics – illustrative example

Table 3 orients example indicators and metrics into a matrix format that demonstrates the connections between response metrics and other categories of metrics used in the LEAP approach.

The matrix can be mapped against and used in conjunction with the TNFD risk and opportunity register, and can be a useful input to feed into disclosure.

Table 3: Matrix of connections between response and other metrics in the LEAP approach

Dependencies and impacts identified	Exposure indicators (dependencies and impacts)	Magnitude indicators (risks and opportunities)	Risk mitigation action/opportunity addressed (response)	Associated response indicators	Associated targets	Progress against targets
<p>1 Risk 1: Organisation has a dependency on water being consumed from an area of water stress. This also has impacts on the local community who depend on water.</p> <p>Risk rating: High</p> <p>Risk timescale: Medium-term</p>	<p>Volume of water consumption by source, from water-stressed areas (absolute and % change)</p> <p>Volume of water recycled or reused (absolute and % change)</p> <p>Volume of water loss (absolute and % change)</p> <p>Measurement of the ecosystem condition, e.g. MSA (absolute and % change)</p> <p>Amount of secure water supply (absolute and % change)</p> <p>Water depth in reservoirs (absolute and % change)</p> <p>Amount of secure water supply (absolute and % change)</p>	<p>Physical risk: Reduction in revenue due to interruption of operations (absolute and % change)</p> <p>Costs of relocating operations</p> <p>Number of business lines exposed</p> <p>Value of assets/revenues dependent on the area</p> <p>Physical and market (transition) risk: Increased costs of water supply (absolute and % change)</p> <p>Reputation (transition) risk: Increased operational costs due to reduction in loyalty from stakeholders</p>	<p>Organisation assesses different response options and decides to increase water-efficiency, reduce water consumption, increase the amount of recycled and reused water and have all sites certified by ISO 14001</p>	<p>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</p> <p>% of affected stakeholders meaningfully engaged on water-related issues</p>	<p>Increase water efficiency by 40% from 2020 levels by 2025</p> <p>Reduce water consumption by 30% by 2025 relative to 2020 levels</p> <p>Increase re-used and recycled water to 80% by 2025 from 40% in 2020</p> <p>All sites certified by ISO 14001 by 2025</p>	<p>Water efficiency</p> <p>Water re-use and recycling rate</p> <p>% of sites certified by ISO 14001</p>

Dependencies and impacts identified	Exposure indicators (dependencies and impacts)	Magnitude indicators (risks and opportunities)	Risk mitigation action/opportunity addressed (response)	Associated response indicators	Associated targets	Progress against targets
<p>2 Risk 2: Organisation identifies that it is developing land for agricultural purposes in close proximity to a biodiversity hotspot that supports pollinators on which it depends</p> <p>Risk rating: High</p> <p>Risk timescale: Short-term</p>	<p>Extent of terrestrial ecosystems converted/ degraded by ecosystem type and business activity (absolute and % change)</p> <p>Measurement of the ecosystem condition, e.g. Mean Species Abundance (MSA), species richness (absolute and % change)</p> <p>Presence/density of trees/shrubs (absolute and % change)</p> <p>Vegetation index (absolute and % change)</p> <p>Altered level of livestock and or crops (e.g. reduced/ avoided loss of livestock and/or crops) (absolute and % change)</p> <p>Area of crops pollinated, by type of crop (km² or equivalent)</p>	<p>Physical risk: Value of assets/revenues dependent on the area Increased capital expenditure on adaptation (e.g. mechanical or hand pollination)</p> <p>Reputation (transition) risk: Increased operational costs due to reduction in loyalty from stakeholders</p> <p>Policy and legal (transition) risk: Compliance costs Description and costs related to loss of operating areas Costs of relocating operations</p>	<p>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, create a commitment to no conversion of natural ecosystems and monitor biodiversity levels in the area twice a year</p>	<p>Performance against commitment for biodiversity gain (baseline y-1)</p> <p>Number of meaningful engagements with affected stakeholders, including rightsholders and local communities, when assessing biodiversity-related impacts</p> <p>% of affected stakeholders meaningfully engaged in area</p> <p>Extent, duration and monitoring frequency of ecosystem restoration projects</p>	<p>Achieve 10% biodiversity net gain across the area by 2025.</p> <p>Reduce annual natural ecosystem conversion rate to zero by 2025.</p>	<p>Biodiversity net gain in area (baseline y-1)</p>



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