The Nature Intelligence *Edge*

Navigating **Nature-related** reporting

A practical guide to biodiversity indicators and frameworks — helping you navigate the rapidly evolving reporting landscape, from the condition of nature at sites, to the actions a business takes in response.

What's **inside**

1. **The reporting Landscape** — The 5 most prominent frameworks
2. **Type of requirements** — State - Pressure - Response
3. **When to use ground-level data** — A decision framework
4. **Getting Started** — Four practical steps

1 The **reporting** landscape

Nature reporting is changing quickly. Several frameworks guide or require companies to disclose their impact and dependencies on nature. While they share a common logic, they differ in authority, purpose, and the level of detail required. Understanding these differences is the first step to building an efficient reporting approach:

Mandatory - EU

CSRD / ESRS E4

The EU's Corporate Sustainability Reporting Directive, specifically the ESRS E4 Biodiversity and Ecosystems standard, is a mandatory EU regulatory framework. It requires large companies operating in the EU to disclose their impacts, risks, and opportunities related to biodiversity and ecosystems. If biodiversity is assessed as material through the EU's double materiality principle, then ESRS 4 is mandatory and disclosure is a legal requirement.

Voluntary

TNFD

The Taskforce on Nature-related Financial Disclosures

A voluntary framework helping companies and financial institutions identify, assess, manage, and report on nature-related risks and opportunities. It is structured around the LEAP approach (Locate, Evaluate, Assess, Prepare), which guides organisations from understanding where they interface with nature through to disclosure.

Voluntary

SBTN

Science Based Targets for Nature

Provides guidance on setting science-based targets across freshwater, land, and ocean. Follows a five-step framework: Assess, Prioritise, Set Targets, Act, and Track.

Voluntary

GRI

The Global Reporting Initiative

Publishes voluntary disclosure standards. GRI 101: Biodiversity 2024 asks companies to identify and report on material impacts, dependencies, and management responses at a site level, with a focus on stakeholder transparency.

Voluntary investor led

CDP

Carbon Disclosure Project

An investor-driven platform that collects standardised environmental performance data on behalf of investors and buyers through its biodiversity module.

Common structure and **data alignment**

These frameworks are complementary, not interchangeable. Most companies will need to use more than one. Because they follow a similar logic, the same data can often be used across frameworks.

All five frameworks share a common structure. They focus on how business operations interact with nature, the impacts and dependencies, and how to manage and report on them.

Location underpins all of this. Knowing where the business operates, and what ecosystems and species are nearby, is the foundation for reporting.

2 Understanding the types of **requirements**

These five frameworks include many requirements, and it is not always clear which apply to your business or where overlaps exist. A practical way to navigate this complexity is to group requirements into three categories using the State–Pressure–Response (SPR) model. This distinguishes between the condition of nature, the business activities that affect it, and the actions taken in response.

Within each category, requirements are organised by topic, with supporting metrics and indicators.

This structure provides a clear way to prioritise. Rather than addressing all requirements at once, companies can focus on the topics most relevant to their operations and select metrics that reflect their specific impacts, dependencies, and context.

SPR at **glance**

State

Measures the condition of ecosystems and species. Metrics/indicators examples: species richness, ecosystem condition, proximity or overlap with biodiversity sensitive areas.

Pressure

The stresses business operations place on nature e.g. land use change, water consumption, pollution, invasive species. Largely standardised and some are captured in most operational reporting.

Response

What the business is doing about impacts, mitigation actions, restoration, offsets, biodiversity management plans. Mostly qualitative; frameworks ask for narrative accounts of actions taken.

Note

Not all biodiversity requirements fit neatly into SPR. Some focus on governance, strategy, or financial allocation. The majority are qualitative (policies, methodology, strategy, targets).

Quantitative requirements are limited to financial effects, risks and opportunities, and some site-level disclosures.

State

The **condition** of the environment

State requirements describe the condition of nature at and around your sites. They are the foundation of biodiversity reporting, as you cannot assess impact, set targets, or track change without a clear baseline.
Across frameworks, state requirements are organised into **seven topics**, each supported by a range of metrics and indicators that companies can adopt. The main focus areas are **proximity to sensitive areas, species-level data, and ecosystem condition**. Compared to pressure and response, the state category is more open-ended, with fewer than half of requirements specifying a defined metric. This makes selection and interpretation more challenging. In this context, the Nature Positive Initiative is playing an important role in convening a global process to build consensus around a smaller, aligned set of State of Nature metrics. Rather than acting as a stand-alone reporting standard, the initiative is reducing fragmentation by identifying a minimum set of credible indicators.

Topic	Description	Example Metrics	Key Note
Biodiversity-Sensitive Areas	Identify operations in/near Key Biodiversity Areas (KBAs), endangered ecosystems or sensitive habitats	No. & area (ha) of sites near Protected Areas (PAs); % spatial footprint in sensitive locations	Consistently required across all frameworks. The focus is on measuring proximity.
Species	Presence, distribution & status of species; threatened species, invasive species, community-level diversity	Threatened species detection; species richness; rarity-weighted richness; Species Threat Abatement and Restoration metric, Species population size	CSRD-E4 provides the broadest coverage of mandatory species-related metrics, followed by SBTN, TNFD, and GRI. A core focus across frameworks is on threatened species
Ecosystem Condition	Health & integrity of ecosystems: structure, composition, and function	Forest Structural Condition Index; Mean Species Abundance; Accounting for Nature Econd	Present in all frameworks, apart from CDP. Currently, frameworks provide broad guidelines, such as assessing ecosystem quality relative to a predefined state
Ecosystem Extent	Area and coverage of natural ecosystems and changes to that coverage over time	Changes in habitat cover (km^2 or ha), extent of natural ecosystems	Present on CSRD-E4, TNFD and SBTN
Ecosystem Service	Benefits nature provides to people/businesses and how operations affect their availability	Ecosystem services the organisation has an impact and depends on: measurement of the change in the availability and quality of the ecosystem services; The Ecosystem Services Status indicators in the WWF Water Risk Filter	Present on TNFD and SBTN
Connectivity	Structural and functional links between habitats; species/gene movement through landscapes	Structural & functional connectivity indicators – (e.g. habitat permeability based on physical features and arrangements of habitat patches); how well genes or individuals move through land, freshwater and seascape).	CSRD requires reporting on both structural and functional connectivity
Indigenous Peoples	Identify operations in/near areas critical to nature's contribution to Indigenous Peoples and Local Communities (IPLCs); land owned/managed in Indigenous territories	Area of land in Indigenous territories	Present on SBTN

The same underlying data can often be used to meet requirements across multiple frameworks simultaneously. Most identify what needs to be disclosed and the information fields to provide, but allow companies to select the metrics most relevant to their context.

Pressure

Direct stresses imposed by business activities

Pressure indicators capture what your business is doing to nature (the stresses created by your operations). These are the most uniform and quantitative requirements across frameworks, typically asking for measurable flows such as hectares converted, cubic metres of water withdrawn, or tonnes of pollutants released. Some pressure metrics are already collected as part of existing operational or environmental reporting (e.g. water consumption).

Water

Withdrawals, consumption, discharge, and wastewater management. Reporting is typically expected against water scarcity hotspots. *(SBTN is the most detailed framework on this topic, followed by TNFD)*

Land use & change

Conversion or modification of ecosystems — area (km^2 or ha) converted since a reference date, ecosystem type before and after, and intensity of land use. *(CSRD and SBTN are most prominent)*

Pollution

Air pollutants, soil contamination, nutrient loading, plastics, and other releases. *(SBTN requires nutrient loading estimates; TNFD covers a broader range of pollutant types)*

Invasive Species

Unintentional introduction of non-native species through business activities — including the number of invasive alien species identified, removal programmes underway, and volumes removed.

Supply Chain

Nature-related impacts arising from sourcing and procurement — commodity traceability and the management of nature-related risks across supply chains. *(GRI and TNFD are the most prominent)*

Response

Actions taken to prevent, mitigate, or adapt

Response indicators capture what a company is doing to address its impacts on nature. Unlike state and pressure requirements, response requirements are largely qualitative. Frameworks ask for narrative accounts of actions taken, governance structures in place, and management processes in operation.

Biodiversity management

Disclosure of biodiversity-related actions, including Biodiversity Action Plans, resources allocated, and management processes across operations and supply chains. *The most prominent response topic — featured across CSRD, GRI, CDP, and IPIECA.*

Mitigation hierarchy

Whether the hierarchy (*avoid, minimise, restore, offset*) has guided management practices, with confirmation of avoidance and minimisation strategies and examples of implementation.

Biodiversity offsets

Whether offsets are used, their purpose, scope, and the standards applied. *CSRD and GRI go further by requesting performance indicators, financial costs, offset type, and quality criteria.*

Conservation & restoration

The extent of land, freshwater, or marine ecosystems conserved or restored — distinguishing between voluntary initiatives and actions required by regulation.

Stakeholder engagement

How local and Indigenous knowledge is integrated into biodiversity actions, what partnerships with NGOs and other stakeholders are in place, and examples of collaborations undertaken during the reporting period.

3 When to use ground-level data across nature frameworks

The most scalable, cost-effective tools for state-of-nature reporting

Innovative technologies, like environmental DNA (eDNA) and bioacoustics are the most cost-effective tools for meeting state of nature reporting requirements at site level, making them well-suited to portfolio-scale disclosure under CSRD, TNFD, SBTN, and GRI.

State of Nature

PRIMARY role for ground-level data

Detecting species presence and richness, identifying threatened or invasive species, assessing ecosystem composition, and verifying biodiversity in sensitive areas. Repeated sampling over time also generates dynamic metrics, enabling companies to track community shifts, measure restoration progress, and demonstrate change against biodiversity targets.

Pressure

SUPPORTING role

eDNA and bioacoustics detect shifts in communities signalling disturbance or pollution, but physical/chemical data (GIS, emissions monitoring, sensors) must remain the primary source.

Response

SUPPORTING role

eDNA and bioacoustics verify whether restoration or mitigation actions are producing measurable biodiversity outcomes, tracking species return and community recovery over time.

Governance & Strategy

SUPPORTING role

eDNA and bioacoustics provide credible data to underpin target tracking, transition plans, and nature-positive commitments within ESG reporting systems.

Current nature frameworks require companies to report across a range of data types, including spatial, physical, and, in some cases, chemical information. eDNA and bioacoustics cannot cover all disclosure needs on their own and can be used alongside complementary tools.

When applied strategically, this integrated approach moves biodiversity disclosure from desk-based assumptions to measurable and auditable evidence that supports compliance, permitting, and long-term nature target-setting.

Even where eDNA and bioacoustics are not yet explicitly required by frameworks, **integrating it now provides significant advantages**:

Scientific credibility

Direct biological proof linking corporate activity to biodiversity change.

Future-readiness

Positions companies ahead of expected updates to TNFD, SBTN, and CSRD toward nature outcomes.

Regulatory resilience

Moves from compliance-focused activity reporting to evidence-based ecological performance.

Faster baselines

Accelerates biodiversity assessment — critical for sectors with major land or water footprints.

Assurance-ready

Digital, auditable records suited to emerging third-party assurance expectations under CSRD.

Accessing finance

Getting data that is ground-truthed and responsive to a change in activity allows for outcome-linked financing mechanisms

4 **Four practical steps** for getting started

If you're just beginning your nature reporting journey, the following sequence provides a practical foundation that will support reporting across most frameworks.

1 Map footprint against sensitive locations

Use geospatial tools to **identify which of your sites are located in or near protected areas**, Key Biodiversity Areas, or other ecologically sensitive habitats.

This spatial screening is the entry point for almost every framework and a prerequisite for prioritising where more detailed assessment is needed.

2 Identify your material pressures

Use sector-level tools such as ENCORE (Exploring Natural Capital Opportunities, Risks and Exposure) and the SBTN materiality framework to **identify which business activities have the greatest potential impact on nature.**

This helps you determine which pressure indicators are most relevant and where to focus target-setting and management efforts.

3 Collect site-level evidence at priority locations

Once high-priority sites are identified, frameworks increasingly expect primary, site-level evidence to **establish baselines, confirm species presence, and track change over time**. Desktop data alone is often insufficient for high-risk sites, it may be spatially coarse, outdated, or unable to reflect recent operational impacts.

This is where field-based methods become essential. Environmental DNA (eDNA) and bioacoustics provides direct biological evidence of species presence and community composition in a non-invasive, scalable way. It is particularly well-suited to state of nature requirements and can help you move from desk-based assumptions to verifiable ecological evidence.

4 Document your management response

Compile a clear account of the actions your company is taking to avoid, minimise, restore, and offset impacts on nature. Most frameworks ask for this in narrative form.

Efficiency tip

Investing in robust, site-level biodiversity data systems creates efficiency across multiple frameworks. The same underlying data can typically be used to meet requirements under CSRD, TNFD, SBTN, GRI, and CDP simultaneously — reducing duplication and improving consistency.

A **final** note

The indicators covered by nature-related frameworks are numerous and evolving, and for companies subject to CSRD, legally binding where biodiversity is material. The frameworks will continue to develop, and the methods available for measuring biodiversity are advancing rapidly.

Investing in understanding where you operate, what pressures you create, and what evidence you can generate to demonstrate ecological outcomes will ensure you're well-positioned — both for compliance and for building genuine credibility on nature.