Landscape-level measurement for biodiversity and nature

Global regulatory and reporting context for the private sector

April 2024
Introduction

The global regulatory context and reporting requirements are increasingly incorporating biodiversity and nature components for the private sector. This brief introduces how existing datasets, metrics and tools can help to report on biodiversity and nature outcomes in landscape and jurisdictional approaches so that those working on and supporting these initiatives can better align their data collection and reporting with global corporate reporting needs.

ISEAL’s recommendation for the consistent use of three foundational approaches for measuring biodiversity and nature-related outcomes at a landscape level are set out in an accompanying paper (Practical steps for advancing a common approach to landscape-level biodiversity and nature measurement).

About landscape and jurisdictional approaches

Landscape and jurisdictional approaches are long-term, collaborative, multistakeholder initiatives to realise common goals and positive outcomes for people, nature and climate at scale within a specific landscape or jurisdiction. They attempt to tackle environmental or social issues concentrated in a particular landscape through integrated management for wider positive impact.

Landscape and jurisdictional approaches share similar characteristics. The main difference is that jurisdictional approaches usually involve a leading or major role for government and are focused within subnational administrative boundaries. The term ‘landscape approaches/initiatives’ will be used through the document to refer to both landscape and jurisdictional approaches/initiatives.
Multilateral and national frameworks and regulations

Two main global frameworks guide national and private sector action on climate and biodiversity: the 2015 Paris Agreement and the 2022 Kunming-Montreal Global Biodiversity Framework (GBF). They are accompanied by increasing mandatory requirements for transparency and disclosure of environmental, social and climate risks from corporate and financial institutions. Examples of such regulatory tools include the EU’s Deforestation Regulation coming into effect in 2025, the proposed Corporate Sustainability Due Diligence Directive (CSDDD), the Corporate Sustainability Reporting Directive (CSRD) and the 2021 Sustainable Finance Disclosure Regulation (SFDR).

The SFDR incorporates the concept of double materiality, which was first introduced in the EU’s 2019 guidelines on non-financial reporting. This requires firms to disclose both how their business is impacted by sustainability issues and how their activities have an impact on society and the environment. Equivalent mandatory double materiality sustainability reporting will be introduced for the corporate sector in 2024 when the CSRD’s European Sustainability Reporting Standards will come into force. One of the standards (E4) is specifically aimed at biodiversity and ecosystems and will apply – like the CSRD – to around 50,000 companies operating in the EU.¹

National due diligence regulations are reinforcing these provisions, including in Germany and the UK, while audited disclosure requirements are also increasingly applied by national stock exchanges to publicly listed companies, further setting the scene for environmental risk management in investment portfolios and loans.

From a biodiversity and nature perspective, while existing frameworks and regulations have different requirements (e.g., no specific targets in the CSDDD, to over 40 mandatory disclosure items on biodiversity for financial actors through the SFDR), they indicate a broad direction of travel. Biodiversity is increasingly accepted as the other side of the climate coin, and an integral part of corporate sustainability.

The GBF frames action for biodiversity and nature conservation around four overarching goals. Most relevant to private sector action are halting human-induced extinction (Goal A) and the sustainable use of biodiversity (Goal B). All four goals include targets to achieve by 2030 and beyond, notably the “30x30 target” (Target 3) to protect 30% of land and waters by 2030 and Target 15, which will require businesses to assess and disclose their biodiversity dependencies, impacts and risks, and reduce negative impacts. Countries must develop national biodiversity strategies and action plans to meet these targets. To track progress, as well as to fulfil potential demand-side disclosure requirements, private sector actors must carry out biodiversity assessments and monitor and mitigate their potential impacts on biodiversity and nature.

¹ Holzheuser S., Hairabedian J., de Valence J. (2023) New developments to the CSRD: What are the implications for non-financial disclosures?
Global corporate reporting and target-setting frameworks

In parallel with the development of the regulatory ecosystem, several target-setting and disclosure initiatives have emerged, led by the Science Based Targets Network (SBTN) and the Taskforce on Nature-related Financial Disclosure (TNFD). While these initiatives do not necessarily work in isolation from each other (for instance, SBTN is a ‘knowledge partner’ of TNFD), they also have not reached consensus on biodiversity and nature assessments. As an example, these two leading initiatives have developed slightly different approaches to the management and disclosure of nature-related risks. TNFD’s LEAP (Locate, Evaluate, Assess, Prepare) framework aims to support companies and financial institutions trying to conduct the due diligence necessary to inform TNFD’s own recommendations with regards to disclosure requirements.

SBTN meanwhile provides guidance for how to set relevant targets for nature (which will include separate targets for land, freshwater, oceans and biodiversity), as well as its own framework to manage and disclose related risks.

Other sustainability systems, such as ISEAL members, have also developed criteria and associated monitoring requirements on biodiversity protection. This has led to a proliferation of metrics, tools and datasets for biodiversity and nature assessments targeting different scales and use cases, ranging from global desk-based risk assessment and prioritisation down to site- or landscape-level application.

This proliferation is compounded by the inherently complex nature of biodiversity and the range of contexts (ecological and geographic) in which measurements could be made to fulfil the various indicators or targets. TNFD catalogues 145 frameworks and tools potentially relevant to a range of applications and sectors, and states, “there is no single metric that will capture all relevant dimensions of changes to the state of nature.” In the context of landscape approaches, this complexity is compounded by the larger scale of operations and impacts ‘on’ and ‘off farm’, and the interactions among urban, rural and undeveloped areas.

Focusing on biodiversity assessments, metrics can be ecosystem-based (e.g. land cover/use for terrestrial ecosystems) or species-based (occurrence and distribution of species of interest). They increase in complexity from simple area measurements (in hectares or similar) or an assessment of population density, to models like the Integrated Biodiversity Assessment Tool (IBAT).

2. TNFD (2023) Discussion paper on draft sector metrics.
3. TNFD Tools Catalogue
Existing metrics, tools and datasets for measurements of biodiversity and nature

Measuring biodiversity is in and of itself a complex task. Trying to identify both how economic activities affect the natural world and their reliance on it appears an overwhelming challenge, especially in landscape and jurisdictional initiatives where different sectors’ activities can compound and affect each other’s impacts and dependencies.

In the context of the regulatory frameworks and global frameworks for biodiversity and nature conservation listed above, initiatives such as the Biodiversity Indicators Partnership and the Group on Earth Observations’ Biodiversity Observation Network (GEO BON) promote the development and use of biodiversity indicators and observation systems. There is a proliferation of indicators, tools and models applicable at different scales, for different disclosure frameworks and for different sectors. The EU Business and Biodiversity Platform has released three iterations of an Assessment of Biodiversity Measurement Approaches for Businesses and Financial Institutions report, which in its latest update includes a decision framework to help businesses select the most suitable approaches. But there is still no standardised corporate disclosure, making it difficult for businesses to know how to identify, monitor and disclose their biodiversity risks.

Currently, no practical guidance on how to comply with the requirements is detailed as part of corresponding texts, binding or not. Due to the complex nature of the task, one of the first objectives of existing efforts to measure biodiversity is to simplify the systems under assessment. At the very least this simplification implies representing the whole system through a) remote data on land cover and quality, and/or b) a subset of ‘indicator’ species or other proxies for biodiversity and/or ecosystem health. As a result, the typical models available to comply with requirements in developing legal frameworks rely on modelled data (a type of secondary data) and often consider only a limited range of threats or drivers of biodiversity loss. This fails to provide an accurate reflection of the actual state of the natural world and the impact of human activities. Crucially, it does not allow a genuine assessment of the effectiveness of potential mitigating measures.

Simplification and comparability present particular challenges for landscape and jurisdictional approaches. Because they cover a wider area, risks and mitigation measures can encompass several ecosystems, and the range of actors and management considerations complicates and can constrain resources available for biodiversity measurement. At the same time, increasing disclosure requirements under global mechanisms are dictating the need for comparable outputs across different contexts.

To bridge these conflicting challenges, our accompanying paper (Practical steps for advancing a common approach to landscape-level biodiversity and nature measurement) explores a stepwise process to apply common foundational approaches and methodologies across landscape and jurisdictional approaches worldwide. This should simplify processes within a framework flexible enough to be adaptable to different contexts, making comparison of outputs feasible while enabling context-specific decision-making to support the best management measures for biodiversity and nature conservation in each landscape. Any new data produced as part of the application of this approach and corresponding monitoring cycles could start to feed back into the global data system architecture.

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Acknowledgements

The authors and ISEAL would like to thank the ISEAL measurement working group members for providing their inputs to the research.

Individuals who participated in interviews are also thanked for their valuable contributions, namely Liza Murphy (IUCN) and the High Conservation Value Network team: Rifat Aldina, Neville Kemp, Olivia Scholtz, Julia Young.

The authors and ISEAL would like to thank the Proforest team who contributed to this research: Veronique Bovee, Bilge Daldeniz, David D’Hollander, Mike Senior, Surin Suksuwan and Rachel Wall.

ISEAL and the team gratefully acknowledge the support of the Walmart Foundation in making this report possible.

About ISEAL

ISEAL supports ambitious sustainability systems and their partners to tackle the world’s most pressing challenges. With our growing global network and our focus on credible practices, we drive impact and make markets a force for good.

From the climate emergency and biodiversity crisis to human rights and persistent poverty, the world needs scalable and effective solutions. Our convening power and thought leadership accelerate positive change on these critical challenges, so companies and governments can meet their sustainability commitments and the UN Sustainable Development Goals.

We work by:

- defining credible practice for sustainability systems based on emerging global consensus
- convening forums for collaboration, sharing of experience and collective action
- delivering expertise, advice and training
- facilitating and promoting innovation to strengthen sustainability systems.

Together, we can deliver real and lasting change for the benefit of people and planet. Join us.

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The development of this report was made possible through funding by the Walmart Foundation. The findings, conclusions, and recommendations presented in this report are those of the authors alone, and do not necessarily reflect the opinions of the funders.
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Proforest is a mission-driven organisation. We believe that agricultural commodity production can be done in a way that meets global demand and works for the natural environment where commodities are grown, benefits the people who live and work there, and in a way that creates a resilient climate.

We manage grant-funded programmes through our charitable Proforest Initiatives in the UK, Africa and Brazil. The Proforest Group has more than twenty years of practical experience in supporting governments, companies, communities and partners, to establish responsible production and sourcing practices in Asia, Africa, Latin America and the Caribbean, Europe and North America.

We focus on the production base and supply chains of agricultural and forestry commodities including soy, sugar, rubber, palm oil, cocoa, coconut, beef and timber. We use our understanding of production and supply chain activities built through working with companies to inform our work with governments, landscapes and sectoral initiatives. Conversely, our programmes enable a longer-term engagement that can build a supportive environment where companies can engage with other stakeholders or collaborate with each other to scale impact.

We support this foundation of governance through creating and facilitating multi-stakeholder platforms; developing tools and guidance; providing policy advice; and delivering training to build capacity and ensure local benefits and local ownership of issues in the places commodities are produced.

Visit our website to see an overview of projects we’ve worked on and to meet our global team. You can also find training and resources on the Proforest Academy.

Suggested Citation for this report: Bachellerie, L., Versteegen, A., 2023. Landscape-level measurements of biodiversity and nature. Report for ISEAL.

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